

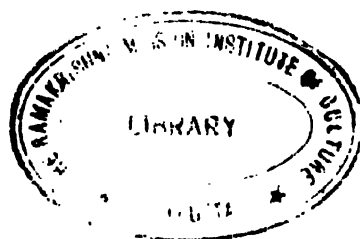
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THE JOURNAL OF THE BRITISH INSTITUTE OF PHILOSOPHY

VOL. IX No. 33.

JANUARY 1934

EDITORIAL

HOWEVER wide as measured by its subject, the world of philosophy, as measured by the number of those who are interested in it and by events other than the publication of new books, is a comparatively small one. Yet other things do happen which may be of interest to the readers of this Journal, and it is proposed from time to time to open numbers with a few paragraphs devoted to the record of them.

The outstanding event of the past year in England has been the Conference between the members of the old established *Mind Association* and the *Aristotelian Society*, which was held at Edgbaston in July under the Presidency of Leonard J. Russell, the Professor of Philosophy in the University of Birmingham. Beginning some twenty years ago with small attendances, these Conferences have grown steadily in size and importance, and form a valuable clearing house for the exchange of thought on the questions that are uppermost in current discussion. The papers themselves of the leaders are now published in an annual volume by the Aristotelian Society; and the present year includes discussions of "Substance and Process," "The Reality of Imaginary Objects," "What Philosophy can Contribute to Politics," "Whether Philosophers must Disagree," and "The Place of the *A Priori* in Knowledge." But the printed record gives a very inadequate idea of the scope and issue of these discussions, and many of the most interesting contributions came as usual in the course of debate.

In the ensuing year the main event in the philosophical world will be the International Congress, which after the usual interval of four years is to take place this year in the city of Prague, and will be of exceptional interest as an opportunity of exhibiting the solidarity of interest and the fraternity of mankind in the effort to

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promote the progress of genuine philosophical thought. The main subjects of discussion will be: "The Philosophy of Nature and its Relation to other Departments of Philosophy"; "The Difference between Descriptive and Normative in the Social Sciences"; "Religion and Philosophy"; "The Crisis of Democracy"; "The Problem of Value"; "The Message of Philosophy." The Congress will meet on the second and continue till the seventh of September, and will be open to all without distinction of nationality. Any readers of PHILOSOPHY who desire to attend are asked to send their names to the Editor, who will forward them to the proper quarter.

Events on the Continent have a special interest for philosophers, as the more unfortunate side of them has had unsettling results in the lives of scholars in the department of Philosophy as in that of others. If this result has brought some of the most distinguished of them to reside at least temporarily in this country, these events are not, for us at any rate, without their bright side; and we venture to take this occasion to welcome them to England.

It was, however, felt that many would be unable to attend the International Congress at such a distance. Arrangements have accordingly been made to hold the Conference of the British Societies as usual this year in July, and the Committee has accepted the kind invitation of Professor Scott of the University of Wales in Cardiff for that occasion.

The Editor would like to remind readers of the Journal that its articles do not claim to be anything more than *discussions* of philosophical topics. There is nothing, therefore, to prevent such discussions being continued in the form of letters to the Editor, when occasion suggests further exploration of the topics dealt with.

MECHANISM, PURPOSE AND THE NEW FREEDOM

PROFESSOR WILLIAM McDOUGALL

THE problem of the relation between mechanism and purpose is of profound theoretical interest. It is the most fundamental of the great perennially disputed problems. And, unlike some other of the great unsolved problems, it is also of far-reaching and profound practical importance. The kind of answer we give to the question affects in a multitude of ways the conduct of our lives, the form and working of all our institutions, our science, our law, our politics, our economics, our morals, our religion.

Men of all periods have made use of explanations of two types, have postulated two different kinds of causation in their dealings with natural events. It has often been said that the primitive animist explains all events in terms of purposive causation. But it is not true; the statement is a libel on the intelligence of the savage. It is true that he gives to purposive action a wider rôle than we do; but also he assumes mechanical causation in all ordinary practical activities, as when he builds a house or a boat, makes and wields his tools. And at the other end of the scale, the nineteenth-century materialist, who in theory explained all events as the mechanical interplay of hard atoms, in practice recognized the reality of purposive causation in the conduct of his own life and in all dealings with his fellow-men; an inconsistency which reached its most amusing climax when T. H. Huxley, in his famous Romanes Lecture, exhorted us to defy the purely mechanical universe in the interests of morality and human welfare; or when Bertrand Russell, after eloquently expounding, as the principles of a free man's worship, the stoic acceptance of a strictly mechanical universe, of which every event, including all human thinking and activity, is strictly determined in every slightest detail for all time, appeared as a social and moral reformer, an advocate of nudism, free love, and the general principle of doing as you please.

These modern stoics are no whit less inconsistent than the stoics of antiquity, who, accepting a strictly determined mechanical universe, exhorted men to subdue their passions, control their natural impulses, and live according to reason. And, one may add, they are rather more inconsistent than the savage who in his treatment of his boat or his spear applies at one moment the mechanical, at another the purposive, principles of explanation and causation.

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It is true that the development of science has brought a considerable restriction of the sphere of purposive causation and a corresponding extension of that of mechanism, with a more exact demarcation of the two spheres. The history of the process is familiar. It began with Democritus in the fifth century B.C., and culminated with the Darwinian revolution in biology. It was a series of bitter controversies in which, on the whole, the advocates of universal and exclusive mechanical causation gained ground, and in the end claimed, and to many minds seemed justly to claim, a sweeping victory.

Surveying this age-long controversy, the verdict must be, I think, that the defence of purpose was in the main badly conducted. It fell into the hands of metaphysicians and theologians; of the former the majority have capitulated to the attacking scientists; while the latter have continued the defence mainly on the ground of the evidences of design in the creation of the world. In this way there grew up the irrational groundless convention that science does and must recognize only mechanistic causation, while purposive causation is left to a minority of belated metaphysicians and to theologians defending a lost cause which they cannot afford to abandon. That brief statement characterizes, not unjustly I think, the state of this great issue in the last years of the nineteenth century.

I am concerned here to discuss the bearing on this question of the most recent developments of the sciences, and there can, I think, be no disputing the proposition that these developments make strongly for a revision of that *fin de siècle* position and for the re-establishment of purposive causation as an indispensable category of our thinking.

Before attempting such a brief survey, let me define the various ways in which purpose finds recognition in our discourse. Philosophers have discussed the problem of teleology as though teleology were a broader category than purpose, some making this claim explicitly. The most general evidence of teleology has always been the appearance of design in things; and appearance of design arises from the improbability that anything so complexly organized as the things in question should have arisen through the fortuitous concurrence of atoms or of physical energies working blindly, mechanistically.

But design implies purpose; therefore the Great Designer is assumed to have created the world with some such purpose as the realization of order, or harmony, or beauty. These two steps result in the Deistic theory which was so widely held by the men of science of the eighteenth century. Others went further along this road and adopted the anthropocentric theory; yielding to the egotism natural to man, they argued that the order and harmony and

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beauty of the world were created in order that man should enjoy them.

For those who stopped at that position, the world of nature remained a purely mechanical system, all living creatures being machines of various degrees of complexity, and man merely the most complex machine of all, though a machine capable of contemplative enjoyment.

Such a theory may be called the theory of *initial teleology*; a better term, I think, than the one proposed by Professor Driesch, namely, 'static teleology.'¹ The mechanistic scientist has no serious quarrel with this theory. Such initial teleology seems to him harmless enough, for it leaves him a free field for the explanation and prediction of all events in mechanical terms. But the theologian and the common man have never been contented by initial teleology. The strong anthropocentric urge has carried them on to believe that the Creator has not abstained from all intervention with our world subsequently to the creative activity, to believe rather that he intervenes more or less to redirect its otherwise mechanical course. Thus the Creator becomes also the Great Engineer; and we have an *external contemporary teleology*. This exhibits three varieties: (a) that of the popular mind which sees the hand of God in all unusual events; (b) that which leaves the inorganic world to undisturbed mechanical causation, but sees the finger of God in the functioning of all living things; (c) that which restricts the teleological intervention to critical occasions in the mental life of men. All three beliefs are varieties of what may be called *interventional teleology*.

Another variety of teleology is that of the biologist who, seeing that many of the processes of living organisms (especially the processes of restitution of form and function after disturbance of the normal course) cannot be explained mechanically, postulates some unknown factor (utterly unspecified except as non-mechanical) which, steering the bodily processes towards their normal goal, keeps them true to the specific type. This, the teleology of many vitalists, may be called *neutral teleology*.²

Now it is certain that all these varieties of teleology derive from man's experience of his own purposive activities and from his belief that such activities (both his own and the similar activities of his fellow-men) are causally efficacious in the world of natural events. It is certain that men, if they had no such immediate awareness of and familiarity with their own purposive activities, would never have conceived any teleological explanations, and that all such terms as

¹ Cf. his *History of Vitalism*.

² In recent times it is represented by the 'entelechy' of the earlier writings of Professor Hans Driesch and by the special form of teleologically operating energy postulated by the late Eugenio Rignano.

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design, plan, goal, function, efficiency, serviceableness, fitness, struggle, striving, effort, could have no meaning and could never have been evolved; and it is doubtful whether such terms as tendency, force, energy, causation, or any words expressing any valuation, whether positive or negative, could have meaning to a creature, conscious, but mechanical or mechanistic in its workings; a creature such as the biologists and psychologists of the Post-Darwinian period have commonly asserted man to be.

It is certain that man has conceived the Creator and Designer of the world after his own image, in the light of his knowledge of himself. It is certain that, if the purposiveness of human activity can be explained away as an illusory appearance, teleology of any kind becomes a groundless and utterly unjustified assumption, 'purpose' a meaningless word, mere *flatus vocis*; while religion and morality remain merely fanciful and illusory constructs of man's 'mythopoeic faculty.' To postulate teleology of any kind, anywhere and anywhen, while denying the reality and efficacy of purposive activity in man, is strictly absurd.¹

I propose then to show very briefly, first, that recent developments of science have undermined the common objections of men of science to the full recognition of the purposive activity of man; secondly, that other recent developments provide increasingly strong grounds for such recognition.

OBJECTIONS TO EXPLANATION IN TERMS OF PURPOSE UNDERMINED BY RECENT DEVELOPMENTS OF SCIENCE

The most general objection arises from a widely prevalent neglect to distinguish between the various forms of teleology defined above. The man of science naturally, inevitably, and properly dislikes interventional teleology in all its three forms; for the good reason that to accept such teleology is to admit that an indefinable proportion of phenomena are supernatural, and, therefore, by their essential nature, beyond the reach of scientific investigation and explanation. If the Creator frequently intervenes in the course of natural events to send us rain or sunshine, how can there be a science of meteorology? If earthquakes are expressions of divine or diabolic wrath, how may we hope to foresee them and to take due precautions? Further, the partial and increasing success of efforts to build sciences of meteorology and seismology affords good empirical support to this natural repugnance. Conversely, on the other hand, the dislike of all attempts to create a science of psychology (still widely prevalent in theological circles) is due largely to the fact that

¹ Yet this seems to be the position of Dr. L. J. Henderson in *The Order of Nature*, and of Dr. Joseph Needham in *Man a Machine*.

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such attempts seem to threaten the last stronghold of interventional teleology.

Interventional teleology, so dear to the theologians, is the one kind of teleology that is logically incompatible with the spirit of science. While the theologian pins his faith to its reality, the man of science equally makes it a prime article of his creed that such intervention does not occur. This is the real crux of the long conflict between Science and Religion.

Science has no quarrel with initial teleology. So long as teleological activity is restricted to the creation of our world, the course of nature since that remote event remains a fair field for scientific explanation. And that is enough for the impartial scientist. The history of thought, from the later Stoics to Newton, Voltaire, Priestly, and in our own time, L. J. Henderson and Joseph Needham, shows how readily men of science may accept initial teleology. Why, then, are they so reluctant to recognize the causal efficacy of human purpose? Such recognition carries no more logical implication of interventional teleology, the natural bugbear of science, than does initial teleology.

One reason, psychologically effective though quite allogical, is that the recognition of human purpose, though it does not logically imply interventional teleology, does open the door to it as a possibility. Indeed, this possibility is the last stronghold of all religion in any vital and significant sense of the word. The reality of some intercourse between the individual human mind and some larger Mind is a vital assumption of all effective religion; and such intercourse implies interventional teleology. Hence human purpose becomes the object both of the cold dislike and suspicion of the impartial Scientists and of the iconoclastic fury of all those who harbour the anti-religious complex.

Closely allied with this most general but allogical objection to human purpose is another, equally influential and equally due to confused thinking. Science rightly seeks causal explanation of all phenomena; and the category of causation is the indispensable foundation of all science that seeks to go beyond the merely descriptive stage. Now there prevails among scientists the belief that all causation is synonymous with mechanistic determination. The history of the genesis and spread of this belief is a subtle psychological problem. It is clear that its prevalence is a modern development, one which is closely bound up with the Newtonian system and with the nineteenth-century delusion of the adequacy of strictly mechanical explanations of all physical phenomena. For under that system all causation was necessarily mechanical causation.

No doubt a considerable part in the genesis of this belief was played by Aristotle's account of causation in terms of causes of a

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number of different kinds, among which final causes were one kind. For the expression 'a final cause' was commonly applied to the result achieved, or to be achieved, by purposive action. And it was asked, How can the result, an event still in the future, play a part in the causation of a present event? The notion is plainly nonsensical. Therefore away with final causes and every trace of 'finalism'! A main feature of the revolt against Aristotle which initiated the modern period of thought was this repudiation of 'final causes' and the growing traditional dislike of all thinking tinged with 'finalism.' Such is the unfortunate influence of 'terminological inexactitudes' upon our poor weak minds.

That this belief in the identity of all causation with mechanistic determination is still widely prevalent is shown not only by its explicit utterance by workers in many branches of science, but also by many implied assumptions of its truth. The assumption is implicit, for example, in the proposal of a numerous group of contemporary German psychologists to construct alongside of the established academic psychology (which they call 'scientific causal psychology'), a psychology of a very different kind to which they would give the name *verstehende Psychologie*.¹

Whatever the exact history of this belief, it is clear that it is without logical justification. Though we may regret the language in which Aristotle discussed causation, we must follow him in recognizing, in principle, causation of two different types. On the one hand, we may properly conceive of causal processes which involve no reference of any kind to future happenings. All such events as are capable of explanation in terms of antecedent and contemporary events involve causation of this kind only. Such events and such explanations, even though not conceived in strictly mechanical terms, are conveniently called 'mechanistic.'² But we are perfectly familiar with

¹ Jung, Münsterberg, Erisman, Spranger.

² As I have pointed out in my *Modern Materialism*, the failure of universal mechanical explanation leaves us with no other meaning or possibility of definition of the word 'mechanistic,' a fact which seems to be recognized by very few of those who use the word. Such negative definition is not very satisfactory; and those who seek to find a more positive definition of the term 'mechanistic explanation' commonly offer some such phrase as 'the kind of explanation given by physics and chemistry.'

The mechanist position (as here distinguished from the strictly mechanical) is in high favour with the biologists especially. All the many adherents of what is called the organismic view belong to this group; all those who insist on the unity and wholeness of the organism; and all the many who have accepted the principle of 'emergence' as the key to hitherto incomprehensible properties of organisms. Here must be reckoned also most of the psychologists of the now so flourishing *Gestalt* school.

It is strange that no one hitherto seems to have attempted the synthesis of the kindred principles of emergence and *Gestalt*. The obstacle to such

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events of a type in which reference to the future seems to play an essential role, namely, all our deliberately planned actions, every action in which we achieve some result which we have first conceived as a possibility of the future and have desired and striven to bring about or realize. All such successful actions are clear instances of purposive causation. They are the only kind of teleological event of which we have direct and intimate knowledge. To put aside such causation as not truly causation on any *a priori* ground is a perfectly arbitrary procedure; it is to be metaphysical in the worst sense. Yet it is just what is done by a multitude of men of science who profess the utmost scorn for metaphysics.

The question whether these two kinds of causation are ultimately distinct, or whether either of them may ultimately be shown to be a disguised form of the other, and, if so, which one is the more fundamental, which the illusory—that question is one which only the progress of science far beyond its present stage can answer. The hasty dogmatism, the gross confusion of thought, and the sheer unthinking ignorance with which this vital distinction is commonly slurred over, or obscured in favour of universal mechanism, is the greatest blot on modern science.

The confused thinking which identifies all causal explanation with mechanistic causation and puts aside purposive interpretation as non-causal is an instance of what the sociologists call cultural lag. Such identification seemed well founded and justified so long as the theory of strictly mechanical causation of all physical phenomena seemed tenable. But the rejection of that theory destroys all ground of such identification, and the continuance of that identification in the minds of so many would seem to imply a failure fully to accept or to understand the completeness of the breakdown of that theory. This lag would seem, then, to find its psychological explanation as an instance of wishful thinking, thinking motivated by a subconscious desire to retain a mode of thinking so congenial to the con-

synthesis seems to be the reluctance of the leaders of the *Gestalt* school to commit themselves to the recognition of the causal efficacy of psychical process, a recognition freely made by many of the emergentists: H. S. Jennings, W. M. Wheeler, and especially the neurologist, C. J. Herrick. Professor Lloyd Morgan, the arch-emergentist, hedges deplorably on this question, as I have pointed out in my *Modern Materialism*.

But to recognize the unity of the organism and even to suggest an explanation of the fact of unity by regarding each organism as one vast *Gestalt* or configurational field of energy, is not to solve all the problems of biology. Especially, all the facts of restitution of form and function after distortion, and, in only less obvious degree, all the facts of heredity and morphogenesis, remain recalcitrant to all mechanistic explanation, even when the organismic, the emergent, and the configurational principles are combined. As so rightly insisted by Professor Hans Driesch and other vitalists, they point to some teleological factor in the life of organisms.

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stitution of our minds. Professor Bergson has rightly insisted on this congeniality, and leading physicists have not been slow to follow him. But the completeness of the renunciation of strictly mechanical explanation and the new freedom which it gives to our thinking require to be emphasized.

All the world knows that of late years physicists have recanted much of their dogmatism, especially their dogmatic denials founded on the clear-cut distinctions of the Newtonian system, time, space, mass, momentum. From the point of view of our topic the great change has been the admission that the strictly mechanical system of explanation, explanation in terms of the kinetic causation of moving masses, was hopelessly inadequate even in the sphere of pure physics. A second change, hardly less significant, is the breakdown of the clear distinction between matter and energy. These two closely allied changes bring with them the abandonment of the dogmas of conservation of mass, of momentum, and of energy. A third great change is the substitution of statistical probability for strict predictability and the abandonment of the dogma of strict determination of all events.

In brief, the great change, the great renunciation is the frank admission that the strictly mechanical system of explanation is untenable.

Of course, it always was untenable. The change is a giving up of a convention which may have been useful in a limited way, but which was made to seem generally true and to be the solid ground of various dogmatic denials only by obstinately turning a blind eye towards many natural phenomena. Einstein has not really changed the nature of the universe, as the language of many physicists might seem to imply. He has changed only the physicist's ways of thinking about the world, has shown the inadequacy of a way of trying to explain natural phenomena which for some centuries had been conventional among physicists, a way which had been even more fanatically followed by the many philosophers and the many students of other branches of science (especially the biologists and the social scientists), who have been unduly dominated by the immense prestige of the physicists. Many of these still cling pathetically to the negative implications of the abandoned mechanical theory, like drowning sailors to a fragment of wreckage.¹

¹ It was surely always obvious to the more impartial thinkers that the strictly mechanical system of explanation was not applicable to such facts as the chemical affinities and properties of elements and compounds. When I was an undergraduate student of chemistry we used to think of the atoms of a molecule as linked together with little hooks which were represented on the blackboard by short straight lines. But no one, I suppose, took these mechanical symbols very literally; and we talked about forces of attraction and repulsion exerted by the atoms upon one another, forces which were

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The great renunciation, the repudiation of the strictly mechanical system of explanation as adequate to all events, is now thorough and complete. But among the physicists (as among other thinkers also) we must distinguish two groups, namely: on the one hand, those who recognize that the great renunciation leaves room in nature for the recognition of the causal efficacy of purposive activities; on the other, those who still reject purposive activities as anathema, as outside the realm of nature, as supernatural or non-natural events and therefore in some sense unreal.¹ The scientists

supposed to act very powerfully across small distances. I remember also that in the pre-relativity and pre-quantum period a physicist of high standing, Wilhelm Ostwald, secured widely diffused interest in his proposal to overcome scientific materialism by abolishing matter altogether, substituting for it a great variety of forms of energy, among which were mental or physical energies (*Vorlesungen über Naturphilosophie*, Leipzig, 1902).

"I believe," writes a modern physicist, "many will discover in themselves a longing for mechanical explanation which has all the tenacity of original sin. The discovery of such a desire need not occasion any particular alarm, because it is easy to see how the demand for this sort of explanation has had its origin in the enormous preponderance of the mechanical in our physical experience. But nevertheless, just as the old monks struggled to subdue the flesh, so must the physicist struggle to subdue this sometimes nearly irresistible, but perfectly unjustifiable, desire. One of the large purposes of this exposition will be attained if it carries the conviction that this longing is unjustifiable" (Professor P. W. Bridgman in *The Logic of Modern Physics*, New York, 1928). It may be added that the psychological root of this illegitimate longing is the fact that all our own causal activity directed upon the world about us, both animate and inanimate, seems to be (with certain possible but rare exceptions) exerted by moving parts of our bodies and, by means of such movements, communicating motion to other things. If it were common experience to communicate with our fellows telepathically or to ignite fire or to initiate other chemical changes by direct volition, the mechanical system would never have enjoyed exclusive favour. The reading of Professor Bridgman's book strongly suggests the need for a companion volume on the psychology of modern physics.

¹ Prominent among the former group (the smaller, I imagine) are Eddington and Jeans. The latter writes: "The fact that 'loose jointedness' [William James's favourite appellation] of any type whatever pervades the whole universe destroys the case for absolutely strict causation, this latter being the characteristic of perfectly fitting machinery." And: "Although we are still far from any positive knowledge, it seems possible that there may be some factor, for which we have so far found no better name than fate [why not 'purposive activity']? operating in nature to neutralize the cast-iron inevitability of the old law of causation. The future may not be as unalterably determined by the past as we used to think." Again, after showing that a mechanical universal ether is impossible, he writes: "We are compelled to start afresh. Our difficulties have all arisen from our initial assumption that everything in nature, and waves of light in particular, admitted of mechanical explanation; we tried in brief to treat the universe as a huge machine. As this had led us into a wrong path, we must look for some other guiding principle." And yet again: "The picture of the universe presented by the new

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of the latter group (which includes many biologists and psychologists) incline to be scornful and resentful of the former, as of colleagues who have abandoned to the enemy the very citadel of science. Although they admit (under compulsion) the inadequacy of strictly mechanical explanations (explanations in terms of the momentum and impact of masses), and though they recognize that perduring particles of matter in motion are not necessarily assumed in all explanations of events, they still stoutly repudiate purposive or teleological activity as a natural process having causal efficacy. And even such a chemist as L. J. Henderson, who elaborates a powerful argument for initial teleology (for design and purposive direction in the creation of our world), continues to deny all causal efficacy to purposive activity in our contemporary world.¹

Such repudiation of the strictly mechanical explanation, combined with refusal to recognize the efficacy of purposive activity, constitutes what may conveniently be designated the 'new materialism.' It seems to be the position held by the majority of contemporary men of science.²

Yet it lacks the respectability of the mechanical theory. The latter, though untenable, was logically consistent; its denials followed

physics contains more room than did the old mechanical picture for life and consciousness to exist within the picture itself, together with the attributes which we commonly associate with them, such as free-will and the capacity to make the universe in some small degree different by our presence. For, for aught we know, or for aught that the new science can say to the contrary, the gods which play the part of fate to the atoms of our brains may be our own minds. Through these atoms our minds [our purposive strivings] may perchance affect the motions of our bodies and so the state of the world around us. To-day science can no longer shut the door on this possibility; she has no longer any unanswerable arguments to bring against our innate conviction of free-will." To which it may be added that she never had any such arguments, a fact which seems to escape both Eddington and Jeans. These passages are cited from *The Mysterious Universe*, New York, 1930.

Similarly Eddington says in a recent address: "His [the physicist's] first step should be to make clear that he no longer holds the position, occupied for so long, of chief advocate for determinism, and that if there is any deterministic law in the physical universe he is unaware of it." (Presidential Address to the Mathematical Association, 1932.)

¹ *The Order of Nature*.

² This position I have discussed at some length as *modern materialism*, the present day successor to strict or literal materialism, in my *Modern Materialism and Emergent Evolution* (London and New York, 1928). Some confusion arises from the fact that some of the scientists who hold to the new materialism use the word 'mechanistic' as synonymous with 'mechanical'; hence they repudiate what they call the 'mechanistic theory' (meaning the strictly mechanical) while refusing to recognize the causal efficacy of purposive activity. This is not a third position; it is merely a variety of the *new materialism* (as defined above), and might well be called *crypto-materialism*. It is the position of the leaders of the *Gestalt* school of psychology.

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logically from its assumptions. The *new materialism* perpetuates many of the same denials (hence the justice of the designation here proposed) merely by reason of mental inertia, the tendency to continue thinking in old ways whose logical foundation has been destroyed.

Let us clearly recognize that there are only two logical positions in this great issue of purpose and mechanism. You may recognize the validity of both mechanistic and purposive explanations; or you may deny one or other of them. There is no third type of causation or causal explanation in question; no third type has been suggested. The new materialism has no logical standing.

RECENT DEVELOPMENTS OF SCIENCE DEMANDING AND JUSTIFYING THE RECOGNITION OF PURPOSIVE CAUSATION

We have seen that reluctance to recognize the causal efficacy of purposive activity has characterized science throughout the modern period; that its chief ground and only logical justification was the belief in the universal adequacy of the Newtonian mechanics to explain all natural phenomena; that with the great renunciation of that belief, the reluctance, though now without logical foundation, persists widely among men of science. What then of the empirical grounds for the acceptance of purposive activity? It is naturally in the biological and more especially the human sciences that we may expect to find such grounds. We can hardly expect that the physical sciences shall provide clear empirical evidence of this kind.

It is necessary to be clear about the logical and epistemological principles involved. And here I can only frankly assert the exclusive validity of the pragmatic principle. In interpreting natural phenomena we form hypotheses; when we find that an hypothesis will not work, we must reject it; when we find one that works well, we call it a theory; and the larger the number of groups of natural phenomena for which it provides satisfactory interpretations, the stronger its claim to be regarded as a true theory. There is no other kind of scientific truth, no other meaning to be given to the words.

I pass over the biological sciences other than psychology, merely pointing to the facts that an increasing number of biologists are repudiating mechanical explanations, recognizing the need for explanations of some other type—the organicists, the emergentists, the configurationists, the neutral vitalists, the psycho-vitalists (such as August Pauli, E. Rignano, and E. S. Russell), and the idealists (such as J. S. Haldane).

In this great problem, as in so many others, psychology is the key science. Psychology during the nineteenth century sought to build itself after the model of the physical sciences with their atomic

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theories and their exclusively mechanical causation. There is still no one science of psychology, but rather the psychologies of many schools. But the outstanding feature of psychology in the twentieth century is the increasing recognition of the uselessness of mechanical or mechanistic psychologies, and the consequent pragmatic demand for and increasing influence of the psychologies which make use of purposive interpretation. We see the rapid spread of the psychologies of Freud, of Jung, of Adler, and of other psycho-analytic sects, all of which are fundamentally purposive (although Professor Freud has needlessly, illogically, groundlessly, proclaimed his adhesion to the deterministic principle). We see the same revulsion against mechanism in the school of *Gestalt*, of which, while some members still hesitate and hedge, others, such as Professor R. H. Wheeler and (less frankly) Dr. Kurt Lewin, plump for purpose. We see it in Professor William Stern's system of Personalism. We see it in the proposal for a *verstehende Psychologie*. We see it in the closely similar demands of German students of the social sciences for a *gesisteswissenschaftliche Psychologie* distinct from the mechanistic psychology traditional in the universities. We see it in the latest publications of Professor E. L. Thorndike, long regarded as a great champion of the mechanistic psychology. We see it even in avowed behaviourists, such as Professor E. C. Tolman, who in a recent book elaborates what he strangely calls 'a purposive behaviourism.' We see it in the last book of the late Hugo Münsterberg, published just before his death during the war, in which he recognized that mechanical psychology, though strictly 'scientific,' is a perfectly useless and artificially distorted account of human life; a recognition which led him to write two psychologies in one volume, a mechanical in the first half, a purposive in the second.

In short, it is increasingly recognized that the long-sustained efforts of many psychologists to find a mechanistic explanation of the simplest adaptive or intelligent actions of men and of animals have failed; and that we can only begin to understand them when we recognize them as instances of striving towards a goal, striving, directed by foresight of some kind and degree and influenced by feeling. The workers in the psychological laboratories are everywhere concerning themselves with problems of motivation, of incentives, goals, drives, determining tendencies, valuations.

I turn to the historians, and here I must be content to give you in a few words the substance of an address by Dr. Charles A. Beard which I recently was privileged to hear. Dr. Beard told us how historians, after being dominated by the ideal of a strictly scientific history based on the assumptions of strict determinism and mechanical causation, have at last realized that such history is utterly unsatisfying and unreal, that, if its fundamental assumptions are

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true, such history is perfectly useless and not worth the trouble of writing it. As he put it, the historians are admitting that they must make history philosophical rather than strictly scientific; he even seemed to suggest that it must become theological once more. All of which is, I venture to suggest, essentially the recognition of the need for a scientific basis of a different kind, a science of human nature, a theory of man, which shall recognize the efficiency of human activities rather than one which represents man as a mere machine, the helpless sport of his environment. In short, the historians, like the psychologists and the workers in the various social sciences, are finding that the mechanical theory of man does not work; that it has led them into a blind alley from which they must return in order to reach the road of progress.

Two pragmatic tests of the mechanical theory of man are in progress on a vast scale. One is the educational system of the United States of America. The other is the attempt of the Russian Soviets to build up a new and better society on this theoretical basis. It is still too early to claim positive evidence from either experiment; but some indications that the theory is not working well are already discernible in both cases.

Finally, I turn to the economists and practical men. Since Adam Smith taught the great principle of *laissez faire*, that principle has prevailed; and indeed logic, as well as capitalism, was upon that side. For whether the beautiful harmony and automatic self-regulation of the economic system in a purely mechanical world was attributed to the design of the Great Architect or to the felicitous operations of natural selection, the practical consequence was the same. Let man accept the universe as it was, including its economic aspects; for indeed, if he was but one bit of mechanism among the rest, he could do no other. And so, economic Man, fortified by the approval of mechanical philosophy, ethics, psychology, and history, gave unrestrained expression to his natural greed and grabbed all he could, under the one great economic law—the Devil take the hindmost. The economist's function was merely to contemplate this part of the universal mechanism, to describe its iron laws and the merciless grinding of its iron wheels; while deprecating those occasional joltings of the economic machine which made a minority of us somewhat critical of its alleged perfections.

And now a bigger jolt than usual has made us all sceptical of the doctrine that man is powerless to direct the course of his own activities, has made us even begin to see that the mysterious economic forces, of which the text-books so long have prated, are nothing other than the desires and aspirations of men. On every hand we hear the demand for economic planning. But, as recently I heard Mr. Norman Thomas insist in an eloquent address, planning is not

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enough. Before we can rightly plan, we must clearly define our purpose. Planning is but finding a means to a goal. Our common goal must be defined and our common purpose to attain it must be firmly set. Then, if only we can completely throw off the paralysing belief in the mechanical doctrines, we shall go forward to furnish the convincing and final pragmatic demonstration of the causal efficacy of human purpose. Fortunate indeed is the American nation in that it has found and is following a leader who brushes aside all mechanistic sophistry and displays his firm conviction that, through clear and resolute purposing, wise planning and vigorous action, *man, collective man, may make himself master of his destiny.*

SOME POINTS IN THE PHILOSOPHY OF PHYSICS: TIME, EVOLUTION AND CREATION¹

PROFESSOR E. A. MILNE, F.R.S.

WHEN I agreed to lecture to-night I stipulated that I might be allowed to interpret the subject announced so as to let my treatment relate less to the subject in general than to some particular aspects which happen to have been interesting me lately. Professor Whitehead, Sir Arthur Eddington, and Sir James Jeans have given to the world brilliant accounts of the present position of physics in relation to mathematics and philosophy. What I have to say bears to their writings, the humble relation of an example to a piece of book-work, or of an application of a theorem to the theorem itself.

The particular subject to which I invite your attention is that of time and space, more particularly time, in relation to relativity and thermodynamics, and the time and space of the whole world. The present position in physics of time seems to me to offer difficulties, and it may interest you if I attempt to discuss them to-night—for a “short space of time,” whatever that may mean!

Strictly speaking, physics has no philosophy. It has method. At any rate physicists, both theoretical and experimental, are rarely philosophers when they are making investigations, but they are acutely conscious of method. Philosophy concerns itself with the justification of these methods, and the ultimate meaning in reality of the results obtained by the methods. Now the methods of theoretical physics seem to be reducible to two species, the method of starting with concepts and the method of starting with things observed. To start with a concept requires two people who agree that they understand what the concept means without giving it an exact definition. They agree that the concept is an entity which, for each of them, stands in the same relation to the things and propositions which are to follow. In some presentations of thermodynamics energy is introduced as a concept; in Sir James Jeans' recent book, *The New Background of Science*, space and possibly even electrons and protons are regarded as mental concepts, though with respect to the latter most physicists would disagree with him.

When a subject is developed from concepts the concepts play the part of the terms occurring in the axioms of geometry. It may be convenient to have some sort of idea of what the concepts stand

¹ An address delivered to the British Institute of Philosophy on October 17, 1933.

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for, to give crude illustrations of them, as for example when we make to ourselves a crude picture of a geometrical point or line. But actually no use is made of these crude illustrations. The concepts are undefined save as being governed by propositions of which they are subjects. To say of energy that it is that which is conserved in processes of certain types takes us no further in understanding what energy means, nor has the proposition any content unless a measurement process is specified by which conservation can be tested. As Mr. Bertrand Russell remarks in an oft-quoted sentence, the upshot of this is that (in geometry for example) mathematicians do not know what they are talking about and do not care; they do not care because to care would be irrelevant.

In the other method of procedure, a synthetic process is followed. Things experienced or observed come first, and then combinations of these are constructed which have such aspects of generality that they give insight into the relations between the things observed. The things observed lead to generalizations which involve terms with an observational meaning, and these generalizations sum up many possible observations.

Physical science in its theoretical development tends, not to oscillate between the two methods, but to replace the first method by the second. The method of concepts often requires the greater imagination and the deeper insight to isolate the concepts which are to prove useful. But it is more primitive. In a way, it saves trouble. The method of defining each term in terms of things already observed requires much painstaking analysis. But it has the ultimate merit of avoiding the unnecessary. The method of concepts affords no test as to whether the concepts are essential. Indeed, the method of concepts is a matter of mental economy, but not of logical economy. It is a pioneer method, without which progress would be often slow or impossible. Concepts wisely chosen lead to discoveries, to phenomena previously unsuspected. Often the conceptual character disappears of itself, when things introduced as concepts become objects of observation. At other times unnecessary concepts are only bundled out by a great revolution in thought. The atomic theory of matter and the dynamical theory of gases both started with concepts, the concept of atomic entities of different species and the concept of these atomic or molecular entities in motion interacting dynamically with one another. The atomic theory of matter was not implied by the rules of chemical combination—the conservation of mass and the existence of combining ratios and so on—but was nevertheless a grand tool of investigation before individual atoms were observed. The dynamical theory of gases led to relations between observable quantities, like Maxwell's prediction of the independence of gaseous viscosity of pressure, subsequently

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verified. In each case the starting-point was a superb effort of the imagination. Rutherford's discovery of the atomic nucleus led to Bohr's magnificent conception of atomic structure as involving discrete electronic orbits about a centre, and Bohr's theory opened up the possibility of unravelling the spectra of the elements and predicting their chemical properties.

Electronic orbits were a hypothesis. Was this a necessary hypothesis? In 1925 Heisenberg answered this question by passing to the other method of theoretical physics the method of introducing nothing but "observables," to use Dirac's word. Abandoning the mention of orbital sizes and frequencies, Heisenberg showed that the transition relations between the observed energy levels in atoms could be obtained by starting from these levels alone.

This great revolution in thought led to the foundation of the quantum mechanics. But it was not a revolution in method. In 1905 Einstein had applied the same method to the notion of simultaneity of events. He showed that when we examine simply the observations which it is possible to make by which we habitually assign epochs to events, then two events which appear to be simultaneous to a given observer are not in general simultaneous to a second observer in uniform motion with respect to the first observer. Einstein swept out of tenability the concept of an absolute simultaneity, previously uncritically accepted as intuitive. Einstein's method was to tie an observer down to stating his tests for what he was disposed to call simultaneity; unless he came prepared to state tests for simultaneity, a judgment as to the simultaneity or otherwise of two distant events was valueless. It was this necessity for concentrating on evidence, which Einstein forced physics to take into account, that has had so profound an effect on the development of physics. It is true that the statement made above, concerning an observer in uniform motion with regard to a second observer, involves a conventional assignment of epoch to an event, and involves further a definition of uniform velocity, which in turn implies a definition of distance and a definition of uniform time. The definition of distance employed by Einstein involved the introduction of the concept of the rigid body, which cannot be defined, so that Einstein's treatment was not free from conceptual taint. We shall later endeavour to avoid such departures from the purely observational method. Nevertheless we may with Jeans speak appropriately of the "Einstein-Heisenberg policy" of concentrating only on observables, and regard the fact that this policy is not only practicable but amazingly successful as one of the discoveries of the century.

Once an unnecessary concept is dismissed it does not return. Nevertheless, new different concepts may then make their appearance. Heisenberg's discoveries were quickly followed by Schrödinger's

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development of the wave-mechanics, which presented a new un-observable ψ , the subject of mathematical propositions but not otherwise defined. Certain aspects of ψ —its absolute magnitude, for example—had physical interpretations and were equivalent to physical measures, but ψ itself remained mysterious. Dirac, in his profound volume, has constructed a complete mechanics which begins by introducing a new set of concepts, not defined in terms of immediate experience. Certain non-numerical magnitudes typified by symbols ψ (or ϕ) and α are introduced as representing "states" and "observables" respectively where a distinction is made between the "observable" α and the number that is obtained when an observation of this observable α is made on the system in the state ψ . Thus the state and the observable are conceptual things, capable of being roughly described but not defined or directly experienced. A purely symbolic mathematics is then constructed on the basis of defined operations between observables and states, and formulae are obtained embodying the fact that under certain circumstances observations assign definite numerical values to observables. Probability interpretations are then placed on certain symbols, capable of a meaning whatever systems or observations are in question. Next, in a most beautiful manner, the equations of classical mechanics are used to suggest relations between observables which are cases of the general abstract theory, and thus certain operations conducted on them are capable of interpretation. Lastly, the constructed abstract theory and the introduced abstract mechanics are applied to particular physical systems, themselves involving such concepts as the point-mass and the point-charge, and the predicted properties of these specific physical systems can then be obtained from the interpretation of the abstract relations. This imperfect summary is only intended to illustrate the development of physics by the successive use of old concepts, then things observed, and then in turn new concepts, the last being possibly very strange ones.

Though the Einstein-Heisenberg policy is fairly new to physics, it is far from new to philosophy. This was the policy of Locke and Hume. Hume in particular irrevocably damaged the idea of efficient causation by examining the evidence by which a particular "cause" was assigned to a particular "effect." Though we may not accept his solution in terms of habit, we owe a great debt to his exposure of certain fallacies of thought; the philosophy of physics considered as a method is in fact the philosophy of Hume. Again, modern logic, in the works of Whitehead and Russell, is the fearless eradication of things that cannot be observed. The theory of number, both of finite number and of infinite number, is the strict application of such a simple experimental process as that of counting objects.

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It is in the domain of microscopic phenomena that the successes of modern physics have been most conspicuous. I should like now to invite your attention to the application of the methods of physics to the less fashionable domain of macroscopic or ordinary-scale phenomena, and to discuss these in relation to certain large-scale phenomena. It is often said that the concepts of space and time may break down in atomic phenomena. But it is no use saying this unless we are clear as to what these concepts mean in larger-scale phenomena, indeed until we are certain that they are only concepts. For example, in order to be able to attach a meaning to the uncertainty principle of Heisenberg we have to give form to the notions of position and momentum, of energy and time, which involve both kinematical and dynamical notions; and the principle implies the transfer to atomic phenomena of notions derived from ordinary experience.

Now there are two well-defined branches of physical science which concern themselves with the macroscopic phenomena. One is the theory of relativity, the other is thermodynamics. Both of these bring us immediately to *time*. The one makes little of time, the other makes much.

The one, relativity, appears to relegate time to the rôle of a co-ordinate. It is often represented as claiming to show that time and space, not separately real, are but aspects of a higher reality, "space-time," which is the true framework of events. The individual is supposed to make his private choice of his resolution of this framework into his own separate space and time, but no one choice is to be preferred to any other. An individual observing two separated distant events may describe one as preceding the other, whilst another may describe them as simultaneous. The time-ordering of the events thus depends on the particular observer, and has nothing to do with the events themselves. As Jeans points out in the book mentioned, this raises acute difficulties concerning the reality of evolution. He mentions that it has been suggested that "the concept of evolution in time may lose all meaning," so that we cannot speak of the universe evolving as a pattern is woven on a loom. If "time is merely a geometrical direction of our own choice in a continuum," the pattern is already spread out, and future events have the same kind of reality as past ones. "Indeed, an inhabitant of a nebula can wave his 'now' through the continuum until its intersection with the world-line of our path passes instantaneously from 1932 to 1942." In fact the theory of relativity does not imply that the observer on a distant nebula can experience or observe the event, near ourselves, which we shall experience in 1942, at an epoch defined by an event occurring in our reckoning as 1932. In the definite meanings it is possible to attach to the words, we shall

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experience the events of 1942 sooner than anybody else can have experience of them. We ourselves are first in the field. But the evolution difficulty still remains. If time means different things for two different observers, how can the universe be said to evolve in time? For no meaning can be attached to a unique temporal ordering of the totality of events.

Yet there is one characteristic of the world frequently adduced to show that it is indubitably evolving. That characteristic is an apparent steady increase of entropy. As each observer's time goes on, the universe appears to him to be moving from a less probable state to a more probable state; it appears to be tending to a changeless state, of uniform temperature, a state called "heat-death" in which all available mechanical energy has been transformed into forms not available at this final constant temperature. In a section called "The Final State of Maximum Entropy," Jeans says that though general considerations cannot indicate the road by which the final end of the universe is reached, they can tell us something as to the nature of this final state. Though the entropy *might* decrease momentarily, this is enormously improbable, and it is still more improbable that it should go on decreasing for any measurable period. Jeans draws explicit attention to the fact that his examples of change of entropy are confined to finite portions of the universe, such as a boiling kettle or red ink mixing with water, but he applies the same conclusions to the whole universe. "There can be no end to the increase of entropy until these regions [regions of the universe at different temperatures] are all at the same temperature, with radiant energy diffused uniformly through space. Then and only then will the universe have reached its final state, the perfect quiet and perfect darkness of eternal night."

Thus we have the two results: relativity suggests that the flux of time is meaningless, whilst thermodynamics suggests that it is highly significant. These are contradictory. If there is a limiting state of the universe to which we are approaching, then states that are old can be distinguished from states that are young, by the degree of their approximation towards the final state. Not only distinguished, but labelled the one old and the other young. But according to relativity different observers assign different times to different events. Which time is the one indicated by thermodynamics? Does thermodynamics indeed select a special time, which we could call absolute time, and if so what observer experiences this time? Thermodynamics appears to say that the system is ageing to *all* observers; it does not keep company with relativity. It is not sufficient with Eddington to say that the entropy-increasing property gives a point to time's arrow. It is not merely a question of the time-sense, the fact that entropy distinguishes one direction

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of time from the other; it is that the interval between two states of the universe, corresponding to a given entropy difference, may apparently be different for different observers.

Jeans does in fact conclude that there is for the world an absolute time, though he derives this not from thermodynamics but from the structure of the astronomical universe. His view is that absolute time and absolute space exist in a wider external world than that of pure physics, that this absolute space and time are found in astronomical nature, and that so an escape may be found from the relativity-view that evolution is meaningless.

It appears to me, however, that Jeans evades the issue. By astronomical nature he means very large-scale phenomena, the outward motions of the spiral nebulae, and his conclusion would be solidly based only if these phenomena disclosed something which contradicts those conclusions to which we have been led by laboratory experiments. Jeans says that absolute time and absolute space do not enter into the nature we study in our physical laboratories. But how? In what sense can a large block of space be absolute whilst a small one is not? If the universe contains an absolute frame of reference, it must also be absolute whatever the scale of the phenomena. We cannot, of course, rule out the possibility that very large-scale phenomena might disclose generalizations not found to be valid for smaller-scale experiments. But Jeans is talking not of phenomena but of time and space, elsewhere considered as "mental concepts." And which large-scale phenomena are in fact the culprits? But there is another point. The second law of thermodynamics is verified for ordinary-scale phenomena, so that even for ordinary phenomena we have the apparent conflict between relativity and thermodynamics. Jeans says: "Through our consciousness we break up the space-time product into space and time, whilst electrons and radiations and protons cannot." Yet it is not suggested that it is due to our consciousness that that aspect of evolution which we call the entropy-increasing property does actually exist. These same electrons and protons which cannot break up space-time into its constituents are the very participants in the drama of the ultimate heat-death. In spite of relativity, therefore, they know how to behave as if a definite time exists. Jeans is even led to conjecture that "our minds may be in contact with reality by other than purely physical elements," just because of their consciousness of "a radical distinction between space and time which does not appear to extend to physical phenomena." Yet he emphasizes an apparently fundamental distinction between time and space when he describes that physical phenomenon which is the running-down of the universe.

I want now to suggest that the impasse arises partly from our forgetting the purely conceptual character of space-time and partly

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from an unjustifiable application of the second law of thermodynamics to the whole universe. Our experience of time is immediate, not a concept; the experiments on which thermodynamics is based are not concepts. But on the one hand "the whole universe" is a concept, as de Sitter has pointed out, save in the case of the uninteresting possibility that the universe contains a finite number of particles. And on the other hand space-time is a concept of which we have no experience, a mathematical invention, useful solely for correlating experiences. We have no right to foist this invention on nature and then complain that nature contains two contradictory phenomena; for the so-called possession of a space-time framework in which time and space merge together is not a phenomenon in nature. Our problem is to correlate the experience of *one* observer (in which, in his time, the universe increases its entropy) with the experience of another observer with a different time. Jeans is, I think, right in suggesting that very large-scale astronomical phenomena afford a means of reconciling these experiences, but not, it seems to me, by pointing to a unique or absolute space or time, which involves grave difficulties in relation to the facts on which relativity is based. We will attempt to remove our difficulties by building up definitions of space and time, or rather building up measures of space and time, from a basis of things experienced. We will pass from concepts of space and time to observables, according to the Einstein-Heisenberg policy.

We begin with the observer. Each observer possesses, for macroscopic phenomena, a definite temporal experience of events at himself. I as an observer and chronicler can say of two events which happen to me which precedes the other. For very small separations of events it may, indeed, occur that I am unable to decide which is earlier, and the indubitability of the time-sequence may fail. But this is not an exception in principle. I may suppose myself to have constructed a clock, running no matter how irregularly, and to have graduated it numerically in some perfectly arbitrary way. I can make the graduations as small as is recognizable. Then when an event occurs to me I can prick off on the clock-disc the position of the hand, and so attach some definite time-number to the event. There is no question of my "resolving my experiences into time and space"—there is no arguing about my own temporal experience. We remark further that the only events the observer actually experiences are events at himself. He may be informed of other events, or infer their existence from his own experience, but he has direct experience only of events at himself.

The observer, myself, is quite unable to superimpose two different intervals on the clock. Once gone, an interval on the clock is gone for ever. Thus from my own experience alone I cannot select one par-

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ticular system of graduation of my clock subdivisions and call them "uniform time." So far uniform time is not definable.

I have certain experience of the relative proximity of objects near me, namely tactual experience. I can extend my arm, and ascertain that I have to extend it more for one object than for another. I can also walk to an object, and count my paces. But it would be difficult to build up consistent measures of "distances" of objects from these observations. If, on the other hand, I use a metre scale, and read off positions of objects against its graduation, either I assume its graduations are equal or that the scale itself is unaltered by displacement—in each case invoking the indefinable concept of the rigid body. As we are endeavouring to proceed without using indefinable concepts, we must exclude the use of the metre scale.

The assigning of a distance to a distant object can be accomplished in principle as follows: I can send a signal (*e.g.* a light-signal) from myself to the object, despatching it at time t_1 by my arbitrary clock. I can then receive back the echo, and note the time of its arrival, say t_2 . If necessary I can arrange another observer at the object who returns my signal immediately he receives it. The position now is that I have two data of observation, t_1 and t_2 . What can I do with them?

Out of two numerical magnitudes two other independent numbers may be constructed in an infinite number of ways. I want to construct two numbers, one of which I can call the epoch of the event constituted by the arrival of my signal at the object, the other of which I can call the distance of the same event, *i.e.* the distance of the object at the instant of occurrence of the event. Though the epoch of an event occurring not at myself is completely undefined, so far, it is clear that it will be convenient to assign to this event an epoch or time-number which is greater than t_1 , the epoch of despatch, and less than t_2 , the epoch of return. For in any sense we can reasonably attach to "earlier" and "later," the event is later than t_1 , earlier than t_2 . Let us adopt as a purely conventional definition of the epoch of the distant event the average of t_1 and t_2 , say T . Thus $T = \frac{1}{2}(t_1 + t_2)$. The event is then said to be simultaneous with the event constituted by my clock-reading T . This is a purely conventional definition of simultaneity, but it is compatible with any intuitive ideas we have as to the meaning of simultaneity, provided we could attach a meaning to saying that the clock was running uniformly and the signal travelled at constant velocity. In fact this conventional assignment of an epoch to a distant event is sometimes said to involve the assumption that the forward and backward signal velocity are the same. But we have not yet defined "distance," hence we have not defined velocity, so the limitation

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would be meaningless. We content ourselves with the epoch T as defined with reference to the arbitrary clock employed.

Having averaged t_1 and t_2 , the simplest remaining thing to do is to subtract them. For technical reasons, it is convenient first to choose an arbitrary number, c , and then define the distance of the event as $\frac{1}{2}c(t_2 - t_1)$. This we will call X . In ordinary language we should say that c is the signal-velocity, so that $c(t_2 - t_1)$ is just the distance described in the double journey. But in our presentation c is just an arbitrarily chosen number. We have now defined distance X without using a rigid-scale. We have used only clock-measures made with an arbitrarily graduated clock.

If we wish to assign measures to the relative direction of two distinct objects, we can measure the angles between their directions with the aid of a rigid body equivalent to a theodolite. It should be noticed that the use of a rigid body for measuring angles is fundamentally different from the use of a rigid body for comparing lengths; the right angle and its subdivisions are *communicable* units, capable of being set up independently, whilst the metre is not a communicable unit. I can explain to a distant geometer what a given angle is, so that he can set one up for himself; I can never explain to him what a metre is without taking one to him, and this assumes that a meaning can be attached to saying that it is unaltered in the process of transport. Once a method has been described for assigning distances and ascertaining angles, a geometry can be adopted and co-ordinates can be assigned to any distant object. It is not necessary here to go into details. The significant step is that the measure or scale of spatial relationship can be constructed out of clock-observations. Space is constructed out of temporal experience—not, that is, its three-dimensional aspect but its scale-aspect. In the case of a one-dimensional world, a geometry is not necessary, and space measures can be constructed purely out of temporal experiences. The adoption of a geometry is necessary when we recognize the three-dimensionality of our possible observations, *i.e.* that we can determine direction in term of two independent measures.

We now want to correlate or compare the clocks of two different observers. When we repeat our measures of the distance X of an object we may find that X remains constant or that X changes. If X happens to remain constant, it is not difficult to show how, if the object also carries an observer with a clock, the two clocks may be synchronized. And if three observers, A , B , C , by such synchronized clocks agree that they are at constant distances apart, it can be shown that the time-numbering of their clocks is unique. This time-numbering they will call uniform time. Whether it coincides with what we ordinarily mean by uniform time is another

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matter, but this unique time-numbering is as far as three such observers can get when they pay attention only to the reception-time of signals. The unique time-numbering they arrive at would coincide with what we ordinarily mean by uniform time when the *strength* of the signals returned are also constant in time, provided we can say what we mean by comparing the strengths of signals. This involves the construction of a piece of apparatus capable of measuring signal-strengths, whose properties remained constant in time. These properties would include length measures of its parts, measured with the same arbitrary clock (now uniquely graduated). Now if another observer, B' , were, in our ordinary language, receding from A , he could be made to appear at a constant distance from A by letting A 's clock run slow. This is equivalent to letting the unit of length conventionally adopted by A increase, so that the size of a signal-strength-measuring receiver would appear to decrease and the weaker signals now received would be estimated as weaker simply due to the smaller instrument used. I have not carried out all the mathematical details of this process, but the general inference is clear. Just as it is generally recognized that no observable differences would be produced in the universe if we had a length-measure arbitrarily changing, so when we base length-measures primarily on time-measures uniform time cannot be defined. Uniform time is a convention based on the simplest description of a set of phenomena occurring in nature—as is obvious when we examine its astronomical definition in terms of the earth's rotation, or in terms of dynamical clocks assumed to remain invariable.

All we can do then is to correlate different ways of time-keeping. The next problem of interest is then to correlate the time-keeping of observers in motion. Suppose then that I , whom I call observer A , repeat my observations on an object B , and find that X its distance changes as T the assigned epoch changes. Let us assume for simplicity that its direction remains constant. This assumes that a meaning can be given to invariance of direction; this can be accomplished with the aid of a gyro-compass. I can now repeat my observations as often as I please, and as close together as I please, either by using a morse-code method of signalling or signalling with differently coloured lights. I must simply be able to recognize and identify return-signals. I can then graph X against T . I can in particular find the slope of this graph at any time T . If this slope happens to be constant, I shall say that the object B is in uniform motion with respect to myself, and call the slope the velocity V , all in terms of my arbitrary clock. The value of V is unaltered by multiplication of the clock-readings by an arbitrary factor.

Suppose B , also provided with a clock, performs similar observations on myself, A . He can send me signals and receive them back;

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choosing the same number c , he can assign epochs T' and distances X' to the events which are the arrivals of the signals at myself. He can thus determine my velocity with respect to himself.

Now suppose that B stands in precisely the same relation to A as A stands in relation to B. Then when A finds B to be moving with a uniform velocity, by his clock, there must exist a set of clock-graduations for B such that B finds A to be moving with a uniform velocity, and moreover with the same uniform velocity. For otherwise they would not be equivalent. A and B are then said to possess similar clocks. The possession of similar clocks by the two observers is thus capable of experimental test.

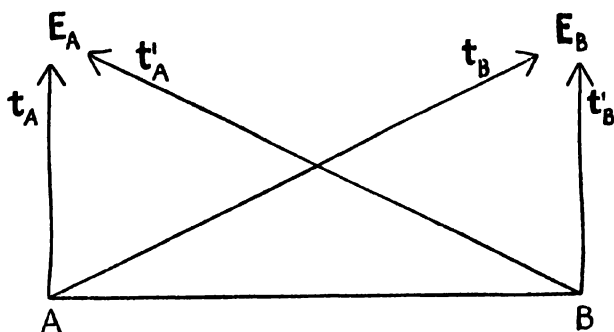
We are thus able to say what we mean by A and B possessing similar clocks without its being required to bring these clocks side by side. The latter test would indeed violate the conditions of the situation, the essence of which is that the two clocks are in relative motion. If we reduced one clock to relative rest, we should have no means of testing whether we had altered the clock in the process. As it is, we have effected a comparison of the clocks whilst they are in motion: what A finds B is doing by his (A's) clock, is described in the same way by A as what B finds is happening to A (by B's clock), is described by B; A describes his experience of B in the same way as B describes his experience of A.

A and B can, however, make one further type of observation. They can read one another's clocks. Or, what is the same thing, B can inform A of the time recorded by his (B's) clock, at the epoch of arrival of a signal from A. A can then compare B's reading of B's clock with the reading of his own clock which he has assigned as simultaneous with this event. In ordinary words, A reads B's clock through a telescope, at a certain time by his own clock, corrects this latter time for the time of travel of the signal, and compares his own (corrected) clock-reading with his telescopic observation of B's clock. It is easy to show that the direct reading by A through a telescope is equivalent to the communication of information by B and that the signal-velocity is equal to the arbitrarily chosen number c .

It by no means follows that A and B agree on the epoch they assign to the event which consists of reading B's clock. This was Einstein's great discovery. A procedure for correlating the readings, equivalent in the sequel to Einstein's results, is as follows. Consider an event at B to which B assigns the epoch t'_B (by direct reading of his clock); and let A assign the epoch t_B to it by his clock, after making the necessary light-signals. Consider secondly an event E_A at A, to which A assigns the epoch t_A (by direct reading of A's clock); and let B assign the epoch t'_A to E_A by his clock, after making the necessary signals. Then since A and B are supposed to be completely

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equivalent in all their relationships, if t'_B happens to equal t_A , t_B must equal t'_A . In other words, suppose that A makes a graph of his value for the epoch of E_B , namely t_B against B's value for the same event, namely t'_B ; then the same graph must result if B plots t'_A , his value for the epoch of E_A , against t_A , A's value. These graphs could be actually drawn and compared. In mathematical language we should



Suffixes A and B denote locations of events. Unprimed symbols (t_A , t_B) are A's assignments of epoch. Primed symbols (t'_A , t'_B) are B's assignments of epoch.

have $t'_B = f(t_B)$ and $t_A = f(t'_A)$, where the two f 's denote the same function.¹

Now it can be shown mathematically that the only possible form of the graph for which this relation holds is represented by

$$t'_B = t_B(1 - V^2/c^2)^{1/2}$$

and

$$t_A = t'_A(1 - V^2/c^2)^{1/2}$$

provided the clocks were synchronized to read zero at the instant when A and B parted company. In words, B assigns to an event near himself an earlier epoch, by his clock, than A assigns to the same event by his clock. Similarly A assigns to an event at himself an earlier epoch than B assigns to the same event. To A, B's clock runs slow; to B, A's clock runs slow. The degree of running slow is the more pronounced the faster the relative motion.

This is a well-known result in the theory of relativity,² but our presentation of it has a different logical setting. We have not used the concept of a rigid measuring-rod; and we have not assumed that A and B are in "empty space." We have not taken the constancy of the velocity of light from observation. We have adopted it as an

¹ When A and B have chosen clock-graduations for which the two f 's are identical, they may be said to be provided with *identical* clocks.

² What are usually called the "Lorentz formulae," connecting A's and B's assignments of epochs and co-ordinates to any event whatever, can be shown to follow from the above formulae without further assumptions.

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axiom giving us our definitions of lengths. We have simply assumed that A and B possess temporal experiences and that they stand in completely equivalent relationships to one another. This condition is satisfied if A and B stand in the same relation to the rest of the universe. Our experimental basis is that it is actually possible to realize in experience two equivalent observers in uniform relative velocity.

Let us in fact apply this result to the whole universe. It is well known to everybody nowadays that the universe as a whole is expanding. By this we mean that the extra-galactic nebulae are receding from us and from one another, receding from one another, moreover, at rates which are proportional to their separations.

This is the same thing as saying that if we take any nebula ~~and~~ divide its velocity by its distance, we get the same result for all nebulae. We do not know from observation how this quotient changes in time. It appears to be the same all over the universe at the present epoch (*i.e.* for nebulae considered simultaneously in the above sense of simultaneity) as far as is yet observed. Whether at another epoch it will be the same we do not know. Some current theories assume that the coefficient of the proportionality is locally constant in time, and hence that the nebulae are being accelerated. Now, however a nebula is being accelerated, its velocity can never exceed the velocity of light.¹ Thus, if the nebulae were being accelerated outwards, each one would ultimately acquire the velocity of light, and the law of proportionality of distance and velocity would cease to be obeyed, for the velocities would tend to become the same for all nebulae, but the distances would be different for different nebulae. In that case the velocity-distance proportionality would be an altogether ephemeral thing. There is, however, no observational evidence that the nebulae are being accelerated. I have given reasons elsewhere for supposing that the velocity of each nebula is a constant, apart from effect of irregularities in distribution leading to residual gravitational fields. We may consider a smoothed-out model of the universe in which the velocity of each is actually constant, the distance increasing accordingly with the time. Observation and all theories agree in showing that the nebulae were all very close together about 2,000,000,000 years ago, *reckoned by clocks at ourselves*. The nebulae may then be likened to an army of objects which all parted company at a definite epoch in our own past, and since then have moved each with its own constant velocity.

¹ Statements sometimes made to the contrary, as for example that nebulae may ultimately possess velocities greater than that of light and so pass out of causal connection with the rest of the universe, are erroneous. The error came in owing to a false identification of "cosmic" time with the time of experience.

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Now in all schemes so far proposed for the universe, every particle or nebula in the ideal scheme is equivalent to every other. The relation between itself and the rest of the universe is the same whatever nebula is chosen. The reason that this condition is imposed¹ on world-models is that we have only actually observed a very small portion of the universe and we want to build up a model of the whole which will not endow the observed portion with special properties. Removing the last vestige of an anthropocentric view of the universe, we refuse to consider our own viewpoint as special, and we regard any other viewpoint as equally good. If you like, we are extrapolating the observed portion of the universe in the fairest possible way, first by constructing round the edges of the observed portion adjacent portions as similar as possible, then building on to those, and so on, meaning always by "as similar as possible" the possession of the same features as viewed from the viewpoint to which the extrapolation is extended. Distance and epochs of events on the nebulae can then be assigned in principle by the methods given. The space in which they are embedded is a purely constructed entity.

It may seem at first sight that if we construct a world-model with the same relation of each particle to the rest, then it must extend indefinitely through infinite space. For the possession of an *experienced* boundary is impossible. Yet it can be shown that on the procedure we have outlined, in the view of any observer the system is of finite radius and the distance of the remotest members of the system cannot exceed a finite length. The apparent paradox is removed by noting that the nebulae form what is called an "open" set of points, infinite in number, having the surface of a sphere for the set of limiting points. The limiting points themselves are not occupied, but representative points occur within arbitrarily small distance of them. The important results for my present purpose are that the total number of members of the world-system is not finite, and the most distant are receding with all but the velocity of light, *i.e.* we can find members moving with speeds arbitrarily close to that of light.

Let us now put together the four considerations: (1) the relativity of time; (2) the running-down of any finite portion of the universe according to the second law of thermodynamics; (3) the expansion of the universe, with members moving at all speeds up to (but just not including) that of light; (4) the infinitude of particles in the universe.

Consideration (4), which is implied by the analysis of world-

¹ In most current presentations of relativistic cosmology this condition is not *imposed*, but is verified *a posteriori*. In my own presentation it is imposed *a priori*.

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structure just discussed, seems to me to be necessary if we are to avoid the philosophical difficulties which would crop up if the number of particles in the universe were finite. For they could always be mapped in a flat constructed space, and if this space were finite the particles would possess a centre of position, and so absolute location in this space would have a meaning. We should want to ask, but be unable to answer the question, why the universe came to be associated with this particular standard of absolute position and absolute rest. We should in fact have found a frame of reference that was specific, yet we could not mention anything to distinguish this frame from any number of physically equivalent ones, except that the universe happened to select it for occupation. In crude language, how could the universe possibly know what frame it was adopting—how could it identify it in the desert of featurelessness. A universe possessing an infinite number of particles does not necessarily possess a mass-centre, and in the case of the model I am discussing definitely does not possess one. Each particle is equally a centre of symmetry. But if the universe were supposed mapped in a finite curved space, and consisted of a finite number of particles, it would still determine an absolute standard of rest in this completely featureless medium, and no one could say how it does it! In the model I am considering, relative position and velocity alone have a meaning.

Now let us compare our own experiences with the experiences of an observer situated on a very distant nebula moving with nearly the speed of light. The clock of the moving distant observer will be, to us, almost standing still, and the epoch at which it stands will be little removed from the epoch at which synchronization occurred, that is, the epoch of separation. Thus whilst our own clock records 2,000,000,000 years as the time that has elapsed since all the nebulae were close together, for a nebula moving at 9/10 of the velocity of light, the time *now* read by the moving clock (our *now*) will be $2,000,000,000 \times \sqrt{1 - 81/100} = 870,000,000$ years; for a nebula moving at 99/100 of the velocity of light, 280,000,000 years; for a nebula moving at 999/1,000 of the velocity of light, 90,000,000 years; for a nebula moving at 9,999/10,000 of the velocity of light, 28,000,000 years. These figures have a perfectly concrete meaning. If we detect an event taking place, as we say, *now* on a nebula moving with 9,999/10,000 of the velocity of light away from us, then the age of the universe reckoned by the moving observer on this nebula, at that event is only 28,000,000 years—comparable with the age formerly assigned by Kelvin to the universe in our own time-scale. We see that the phrase "the age of the universe" has no objective content. Given an event, we have to mention an observer in whose "now" it occurs, and the ages are different according to the observer chosen.

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It then follows that the universe for the distant observer has only been running down for 28,000,000 years. For us it has been running down for 2,000,000,000 years. And these two estimates relate to the same event, observed by two different observers. Thus for the fast-moving observer the universe has run down less than for us, at the two "nows" corresponding to the same event. Since, with an infinite number of nebulae in the world running away from us with all speed up to that of light, we can always find an example of a nebula with a velocity which is arbitrarily close to that of light, we can therefore specify a nebula for which, at the event on it in our "present," the running-down of the universe is as little as we please (reckoned from its zero).

It follows that though the universe is running down for each separate observer, no absolute measure of the amount it has run down at any definite instant of our time can be given. For us, it has run down a definite amount. But for other observers whom we regard as contemporaneous observers, it has run down less, and we can always in principle mention observers for whom it has run down as little as we please. Here there is no sense in which it can be said that the universe is running down independent of an observer. In the ordinary sense of *always*, it always contains observers or states which are practically at the outset of their world-careers, ready "wound-up." The world-system, though decaying and dying at each separate place and for each separate observer, always comprises other observers, at great distances, for whom this process of decay has hardly gone on at all. It is not a question of cycles of rejuvenation, or of a process of revivification. The fresh start is always present, but it is not really a fresh start, it is the one start that every portion had, but differently reckoned. The world-system is like a tree which decays at its centre, but lives on just under the bark. Thus no absolute sense can be attached to saying that the world *has* run down, though everywhere it *is* running down. It always contains experiences for which the process of running down has hardly progressed at all. The world therefore lives for ever. Near its apparent boundary, the world in Keats' words is

"For ever piping songs for ever new . . .
For ever panting and for ever young."

If we call "creation" the indescribable and unobservable state out of which the systems were born (for us, 2,000,000,000 years ago) then we may say that there are always events in the world for which antecedent creation is only just a thing of the past. We cannot observe the event of creation itself, even in the limit, for it is only an occurrence *in our present* for nebulae moving with the speed of light, and these if they existed would be invisible, unobservable.

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The event of creation itself is discreetly mantled in invisibility. Not only can we not go behind creation, we cannot go right up to it; but we can get within an arbitrarily short experience of it, by observations that are in principle capable of being carried out. There is no re-enactment of creation. Creation—one event; I have missed out the copula. You can say “was” or “is” at your choice. There is no difference in the two propositions, until an observer is mentioned. In any one observer’s world-wide present, for whom creation “was” so many years ago, we can always specify events the observers at which reckon creation as arbitrarily close to “is.”

This situation may be very difficult to imagine. The difficulty is just that of imagining an infinity of objects in a finite space. (It must be remembered that the dimensions in the direction of motion are reduced by the motion, in accordance with the law of the Lorentz contraction.) But there is no difficulty in *describing* what we may expect to observe, and this is all that can be demanded. The usual theories put the burden of the trouble on the difficulty of imagining a conceptual curved space. I transfer the difficulty to that of imagining an open set of points. This is not really difficult, and in any case it has the advantage of being describable in terms of experience.

The application of the second law of thermodynamics, invoked in the ordinary proof that the universe is running down, involves the axiom that in any process which occurs in the world it is possible to find another portion of the world unaffected by the process. For to estimate the increase of entropy consequent on the change—to estimate the degree of “running-down” involved in the process—it is necessary to compensate the process by reversible changes carried out between the affected part of the universe and the unaffected part. A process must be imagined in which the affected part is restored to its initial state, and the entropy-changes thereby occasioned in the originally unaffected part estimated. It follows that if a process goes on which affects the whole of the universe simultaneously it is impossible to estimate the change of entropy. In such case the proof of the entropy-increase breaks down. Now the expansion of the universe, with bodies separating at different speeds, is a phenomenon which goes on of itself and affects the relations of all the separate parts continuously; it may be described as a non-uniform radial dilatation, resulting in increasingly perfect velocity-segregation of the separate parts. But the universe is not an enclosed system. Unlike the systems considered in thermodynamics, it has no confining boundary, though as we have seen it has an apparent though unattained boundary. Whether it is surrounded by “empty space” or not is a meaningless question, since it can be shown that there is no possible causal connection

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between the objects (if any) outside the sphere of observation and those inside it. The expanding universe may be described as creating space as it expands, or alternatively as expanding into empty space. This external unobservable space need not be actually empty; its contents can be readily described mathematically, but they automatically make room for the observable part to expand into, so that the space behaves in effect as empty. The external occupants are genuine wills-o'-the-wisp. In either case the system is totally different from an enclosed system, and it acts as its own Maxwell's sorting demon. Maxwell pictured a demon capable of opening and closing a door in a partition in a gas-filled vessel in such a way as to segregate fast-moving molecules from slow ones. The natural expansion of a cloud of objects such as nebulae into "empty" space is precisely such a type of segregation. For it effects and then accentuates a complete sorting-out of velocities, more and more completely concentrating the faster objects at the greatest distances. Just as Maxwell's sorting demon could cause the gas on one side of a partition to become hot and the other cold without expending mechanical work, and so could avoid the consequences of the second law of thermodynamics, so the universe as a whole avoids the heat-death. It does this in virtue of the expansion and the infinity of particle number, taking into account the relativity of time.

To summarize, the passage of time is a definite part of the experience of each individual, and from it may be constructed both time-measures and space-measures without the introduction of the concept of the rigid body as a length-measuring tool. Different individuals assign different epochs and different distances to the same event, and the relation between the epochs they assign is perfectly definite for any two observers (in uniform relative motion) who stand in the same relation to the rest of the universe. This relation, predicted long ago by the special theory of relativity, is derived here from a different observational basis. It is applicable as it stands to the different bodies forming constituents of the expanding universe, which presumably contains, and on a reasonable basis for extrapolation certainly contains, particles moving with all speeds up to that of light, and, moreover, an infinite number with speeds lying within any arbitrarily small fraction of the velocity of light. Such particles, in the world-wide instant of an observer near ourselves, estimate the world far younger than we do. For them the world has scarcely begun to run down. Particles, nebulae, or observers can be specified arbitrarily near to the event of creation, in their own reckoning, at the world-wide instant corresponding to any specified event in the history of any other observer. The world is thus running down, ageing, and decaying for each separate

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observer, but contains an infinite sequence of observers for whom it is arbitrarily young. The world is thus a continuing system; each particle or nebula has an evolutionary experience behind it and in front of it, with ultimate decay as its goal, yet the world as a whole cannot be said to decay. It is not the same in an observer's to-day as in the observer's yesterday, but it is the same for ever. Creation never recedes into the past; it is only just beyond the limit of observability in our own present. Time advances for each separate observer, but the universe as a whole knows no definite age at an assigned event; the world-wide instant of the observer to whom this event occurs contains experiences which assess the age of the world at all values from that assigned by the given observer down to zero. Each observer may legitimately count himself, and will in fact reckon himself, as the world's oldest inhabitant.

I believe that these various considerations go far towards removing the apparent contradictions between thermodynamics and relativity to which we earlier drew attention. Though I have been led to these conclusions by studying one particular possible model for the universe, the same conclusions, or substantially similar ones, probably follow on any model, in particular on those which make use of a conceptual curved, expanding map—so-called expanding space—to represent the world. The main points are the existence of nebulae moving with all speeds up to that of light, so that all possible smaller time-reckonings are existent in the world-instant of a given observer at a given time-reckoning; the inevitable running-down of the universe for each separate observer, with the existence of all lesser degrees of run-downness in the same world-wide instant; and the existence of a singular condition for nebulae at the maximum distance, such that the singularity in our past experience which we call creation reproduces itself at, and is all but observable near, the apparent boundary of the system. I commend to philosophers the idea that creation is ever present in the universe; not a new idea, but one to which, in my opinion, we are led by the strictest interpretation of modern physics and astronomy in the light of their philosophies.

SIR ARTHUR EDDINGTON AND THE PHYSICAL WORLD

W. T. STACE, LITT.D.

SIR ARTHUR EDDINGTON'S brilliantly phrased article, "Physics and Philosophy," which appeared in the January 1933 issue of *Philosophy*, seems to me to contain a number of things which are calculated to be provocative to the mere philosopher. And I propose in this article to discuss what appears to be one of the most important of these provocative things, namely, Sir Arthur's view of the status of the physical world.

I hope I shall not be misrepresenting his general position—so far as it is philosophical, and not specifically scientific—if I boil it down to the following rough paraphrase. "There are two quite distinct worlds: the *familiar world* of sticks and stones and stars, of colours and sounds and smells; and the *physical world*, which consists of electrons, protons, etc. The physical world has no colour or smell or taste. It has not even spatial extension. Time may possibly be a feature of it. It is doubtful whether it possesses number and multiplicity—twoness, threeness, and so on—in the sense in which number and multiplicity apply to the familiar world of sticks and stones. The familiar world consists of—or perhaps I might say, is characterized by, though it makes no essential difference—sense-data which are 'in minds' and are even 'illusions and subjective interpretations.' The relation between the two worlds is extremely remote and indirect, and the physical world is reached by *inference* from the familiar world. We never come into direct contact with it. We never see it, touch it, smell it, taste it. Presumably we could not do so even if our senses were infinitely acute, for it *has* no colour, taste, etc. We only infer it from the sense-data which are 'in the mind.' This physical world of electrons and protons, however, is not a hypothetical entity or fiction. It is real"—though Sir Arthur avoids the use of the word real. "It actually exists."

This general scheme of things has been familiar since the seventeenth century. The details—the electrons and protons—are, of course, new. And the exclusion of space and number from the physical world was not made by the seventeenth-century founders of the scheme, though that too has its analogues in the past. But the "bifurcation of nature"—as Whitehead has called it—into two totally unlike worlds, the denial that colour and the other sensory qualities belong to the physical world, and the suggestion that they

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are merely "mental," that they are "in minds," that they are even "illusions" and "subjective interpretations," go back, of course, to Galileo, Hobbes, Locke, Newton.

That there are grave objections to calling colours and other sensory qualities "mental," to supposing that they are in no sense objective, need not, I think, detain us. For these objections, and the arguments on which they are based, do not, I believe, concern the physicist, though they do concern the philosopher. For example, someone might argue as follows. He might say: "The view that sensory qualities are mental depends upon the uncriticized dogma that there are only two realms to which they could belong, the physical and the mental. If this were so, then to prove that they are not physical would be the same as proving that they are mental. And this is what the physicist does. But the assumption on which this argument is based, the traditional common-sense division of the universe into mind and matter and nothing else, is false. There is a third realm, which is neither physical nor mental, but which we may call the 'neutral' realm. Sensory qualities belong to this realm, and are neither physical nor mental." So far as I can see, the physicist would not have the slightest objection to such a view. He would say, I think, "This is no concern of mine. My business is to describe the physical world, not the mental world. I feel sure that sensory qualities are not part of the physical world. Indeed I can prove it. I have expressed this by saying that they are subjective. If that word is considered objectionable, I have not the least objection to using some other word such as 'neutral.' It appears to me that this is hair-splitting—but hair-splitting perhaps is the special business of philosophers. At any rate it is to me a matter of no importance. All I insist on is that colours, sounds, and their like, do not belong in the bag of things which I call the physical world. So long as you admit this, you can put them in whatever other bag you like."

From this point of view Sir Arthur's statement, "Mind is the first and most direct thing in our experience; all else is remote inference"—which, he says, horrified the philosophers so much—would appear to have nothing horrifying in it except the apparent identification of sense-data with minds. *That*, I suppose, was what shocked the philosophers. And that is not, I fancy, a matter on which Sir Arthur would wish to press his opinion. What he intended to say evidently was, "Sense-data are the first and the most direct things in our experience; all else is remote inference." Whether sense-data are mental or neutral, whether they are "in" minds or "outside" them, he will not care, so long as they are not supposed to be characters of his electrons and protons. And to this statement—that they are not characters of electrons and protons—I do not

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think that the philosopher can possibly object without going impertinently outside his province. If the physicist tells us that atoms have no colour, taste, or smell, we must, I have no doubt, accept his word for it. At any rate I propose for the purposes of this article to do so.

Thus, if we cut out all the questionable statements about sensory qualities being "in minds," being "subjective illusions," and so forth, that part of Sir Arthur's philosophy on which, I think, he would desire to insist might be simply stated thus: "There exists a physical world of protons and electrons which do not possess the sensory qualities. And this world is not in any way hypothetical or fictitious. It is real."

I apologize for foisting upon Sir Arthur the word "real" to which he objects—or of which, at least, he is timorous—but it is convenient, and I do not think I mean by it anything more than he means to express by other language. I am not using it as "a sort of halo," or endeavouring to lay any kind of verbal trap. I mean by it nothing more than is meant when we say that the cat is real, the moon is real, the table is real. I mean by it simply "existent."

Now I do not believe that protons and electrons are real. I believe they are just what Sir Arthur says they are not, namely, fictitious or hypothetical entities, or, as I prefer to call them, mental constructions. And this is the issue which I wish to discuss.

First of all, however, let me say that such a view, if accepted, casts no sort of aspersion upon the validity of science, nor in any way derogates from its dignity or its claim to teach us "truth"—provided the word "truth" is properly interpreted. Science can get on just as well with fictitious atoms as it can with real ones. In fact I cannot see any reason why the physicist, as such, should take the slightest interest in the question whether his atoms are real or not. And I suspect that, if he is inclined to regard it as an insult to his atoms to say that they are not real, or if he incontinently rejects that view without consideration, this is merely because he—like some others of us—cannot avoid the absurd superstition of supposing that words like "real" and "existent" convey a sort of halo. I suspect that this is at the bottom of Sir Arthur's insistence that atoms are not "mere" hypothetical or fictitious entities. Why should the physicist be concerned with the ontological status of the atom? It is, I think, purely a metaphysical question, and not a scientific one at all.

To show that this view is not really obnoxious to scientists themselves, I will venture two quotations. "It matters little," says Poincaré, "whether the ether really exists; that is the affair of metaphysicians. The essential thing for us is that everything happens as if it existed, and that this hypothesis is convenient for the explana-

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tion of phenomena."¹ We may very well substitute atoms for ether here. It is true, I believe, that atoms are supposed to be more strongly evidenced than ether. But that does not affect the principle which Poincaré is asserting. "Whether the man of science," says Mr. E. N. de C. Andrade, "regards his atoms as having an ultimate reality or not does not affect the validity of the theory; the theory is just as useful in introducing order and promoting discovery if they are merely polite fictions as if they are desperate realities."² Thus the question at issue is not, I believe, of any importance to the physicist. But it is of importance to the philosopher, that is, to the person perversely interested in such puzzles. And I believe that, indirectly, it is of importance to the plain man, as I shall briefly show at the end of this article.

Sir Arthur tells us—perfectly correctly, I think—that we can never be directly conscious of anything except sense-data. (I am not discussing whether we can be conscious of consciousness, or of our "souls." I am discussing only external things.) This rules out any suggestion that we can know that atoms exist by *perceiving* them. We never do perceive them. We perceive only sense-data. It is true that Sir Arthur says, "I am not sure whether I ought to say that I have seen an electron. . . . I have seen a wavy trail. . . . I give the name electron to the object which has caused this trail to appear." He says also with truth that the same doubt exists as to whether anyone has ever seen a star. We see a "disk of light" and we give the name star to the "object which some hundred years ago started the chain of causation which has resulted in this curious light-pattern." There is no inconsistency here, and the matter is merely one of terminology. I shall adopt the usage of saying that what we see is neither a star nor an electron, but a "disk of light" in one case and a "wavy trail" in the other. These are both sense-data. And this agrees with the view that we only perceive sense-data. We are agreed, then, that we cannot say that atoms exist because they are *perceived* to do so.

Hence, thinks Sir Arthur, the atom and the star must both be "inferences" from sense-data.

How such an inference can possibly be made (in either case) I do not know. I am not absolutely certain that Sir Arthur means that we infer these objects by means of the law of causation. In so supposing I *may* be misunderstanding him. But I think that is what he means. He uses language which certainly seems to imply it. The clues by means of which we pass from sense-data to the physical world are, he says, "certain regularities in our sense-data," which "provide us with the laws of physics," and also "provide the rules

¹ *Science and Hypothesis*, Halsted's translation, p. 174.

² *The Mechanism of Nature*, p. 6.

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of inference." It may perhaps be true that not all the regularities in the sense-world are causal sequences. But I think it is to causal sequences that Sir Arthur refers. He speaks of the star (physical object) as "the object which . . . started the chain of *causation* which resulted in this curious light-pattern" (the sense-datum), and of the electron as the "object which has *caused* the wavy trail." Thus he certainly does regard the physical world in general as the *cause* of which the familiar world is the *effect*. And I think it is clear that the kind of inference by which he passes from sense-data to electrons and protons is the inference from effect to cause. The inference would then be: All things must have causes. The disk of light and the wavy trail must have causes. And we can infer the causes, *i.e.* the star and the electron, from the effects, namely, the sense-data.

In the latter part of his article Sir Arthur seems to throw doubt upon the existence of the law of causation. He calls it "a principle which science has found no trace of." If this is so, it does not seem at once clear how he can use this principle to infer the causes of sense-data. But perhaps this apparent inconsistency is due to the necessarily brief and popular character of his article. It is clear, however, that the law which connects cause with effect, electron with wavy trail, will have to be reinterpreted as an "indeterministic" law. Possibly this can be done, and I will not press the point further. I will assume it agreed that there is *some* kind of law of causation—whether deterministic or indeterministic—by means of which an inference is supposed to be made from effect to cause, from sense-data to atoms.

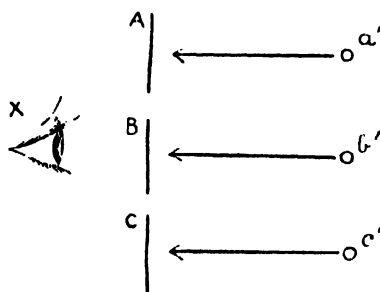
But is it not clear that such a use of the law of causation, however interpreted, is invalid? The only reason we have for believing in the law of causation is that we *observe* certain regularities or sequences. We observe that, in certain conditions, A is always followed by B. We call A the cause, B the effect. And the sequence AB becomes a causal law. (I am ignoring here the great difficulties in defining causality, and the fact that some writers, such as Mr. Russell, would extrude it altogether from science and substitute for it "functional dependence" or some other such conception. And I am intentionally using the crude and popular symbolism for a sequence of phenomena AB for the sake of simplicity.)

Now these sequences or regularities are always among sense-data. This must be so, because, on Sir Arthur's own showing, we never observe anything except sense-data, from which it follows that all *observed* sequences are sequences of sense-data. A is a sense-datum, and B is a sense-datum, and any other cause or effect ever observed by any human being must have been a sense-datum. This means that, so far as anyone has ever observed, the cause of one sense-

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datum is always another sense-datum, and that all known causal laws apply solely to the world of sense-data, and not to anything beyond or behind it. And this in turn means that we have not got, and never could have, one jot of evidence for believing that the law of causation can be applied *outside* the realm of sense-data, or that sense-data can have any causes (such as the supposed physical objects) which are not themselves sense-data. This argument, it will be observed, holds equally whether we call sense-data mental entities, neutral entities, illusions, or anything else.

Put the same thing in another way. Suppose there is an observed sequence A-B-C represented by the vertical lines in the diagram.



Then the cause of C is B, and the cause of B is A. A, B, and C are all sense-data. The observer X sees, and can see, nothing except A, B, and C, and, of course, other sense-data in the general world of sense-data. What *right* has he, and what *reason* has he, to assert causes of A, B, and C, such as *a'*, *b'*, *c'*, which he can never observe, behind the sense-data? He has no *right*, because the law of causation on which he is relying has never been observed to operate outside the series of sense-data, and he can have, therefore, no evidence that it does so. And he has no *reason* because the phenomenon C is *sufficiently* accounted for by the cause B, B by A, and so on. It is unnecessary and superfluous to introduce a *second* cause *b'* for B, *c'* for C, and so forth. To give two causes for each phenomenon, one in one world and one in another, is unnecessary, and perhaps even self-contradictory.

Is it denied, then, it will be asked, that the star causes light-waves, that the waves cause retinal changes, that these cause changes in the optic nerve, which in turn causes movements in the brain cells, and so on? No, it is not denied. But the observed causes and effects are all sense-data, or at least possible sense-data. And no sequences of sense-data can possibly justify going outside the series of sense-data altogether. If you admit that we never observe anything except sense-data and their relations, regularities, and sequences, then it is obvious that we are completely shut in by sense-data,

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and can never get outside them. Not only causal relations, but all other observed relations, upon which *any* kind of inferences might be founded, will lead only to further sense-data and their relations. No inference, therefore, can pass from what is sense-datum to what is not sense-datum.

The fact is that atoms are *not* inferences from sense-data. No one denies, of course, that a vast amount of perfectly valid inferential reasoning takes place in the physical theory of the atom. But it will not be found to be in any strict logical sense inference *from sense-data to atoms*. An *hypothesis* is set up, and the inferential processes are concerned with the application of the hypothesis, *i.e.* with the prediction by its aid of further sense-data, and with its own internal consistency.

That atoms are not inferences from sense-data means, of course, that from the existence of sense-data we cannot validly infer the existence of atoms. And this means that we cannot have any reason at all to believe that they exist. And that is why I propose to argue that they do not exist—or at any rate that no one could know it if they did, and that we have absolutely no evidence of their existence.

What status have they, then? Is it meant that they are false and worthless, merely untrue? Certainly not. No one supposes that the entries in the nautical almanac “exist” anywhere except on the pages of that book and in the brains of its compilers and readers. Yet they are “true,” inasmuch as they enable us to predict certain sense-data, namely, the positions and times of certain “disks of light” which we call the stars. And so the formulae of the atomic theory are true in the same sense, and perform a similar function.

I suggest that they are nothing but shorthand formulae, ingeniously worked out by the human mind, to enable it to predict its experience, *i.e.* to predict what sense-data will be given to it. By “predict” here I do not mean to refer solely to the future. To calculate that there was an eclipse of the sun visible in Asia Minor in the year 585 B.C. is, in the sense in which I am using the term, to predict.

In order to see more clearly what is meant, let us apply the same idea to another case, that of gravitation. Newton formulated a law of gravitation in terms of “forces.” It was supposed that this law—which was nothing but a mathematical formula—governed the operation of these existent forces. Nowadays it is no longer believed that these forces exist at all. And yet the law can be applied just as well without them to the prediction of astronomical phenomena. It is a matter of no importance to the scientific man whether the forces exist or not. That may be said to be a purely metaphysical question. And I think the metaphysician will pronounce them fictions. But that would not make the law useless or untrue. If it

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could still be used to predict phenomena, it would be just as true as it was.

It is true that fault is now found with Newton's law, and that another law, that of Einstein, has been substituted for it. And it is sometimes supposed that the reason for this is that forces are no longer believed in. But this is not the case. Whether forces exist or not simply does not matter. What matters is the discovery that Newton's law does *not* enable us accurately to predict certain astronomical facts such as the exact position of the sense-datum, the "disk of light," known as the planet Mercury. Therefore another formula, that of Einstein, has been substituted for it which permits correct predictions. This new law, as it happens, is a formula in terms of geometry. It is pure mathematics and nothing else. It does not contain anything about forces. In its pure form it does not even contain, so I am informed, anything about humps and hills in space-time. And it does not matter whether any such humps and hills exist. It is truer than Newton's law, not because it substitutes humps and hills for forces, but solely because it is a more accurate formula of prediction.

Not only may it be said that forces do not exist. It may with equal truth be said that "gravitation" does not exist. Gravitation is not a "thing," but a mathematical formula, which exists only in the heads of mathematicians. And as a mathematical formula cannot cause a body to fall, so gravitation cannot cause a body to fall. Ordinary language misleads us here. We speak of the law "of" gravitation, and suppose that this law "applies to" the heavenly bodies. We are thereby misled into supposing that there are *two* things, namely, the gravitation and the heavenly bodies, and that one of these things, the gravitation, causes changes in the other. In reality nothing exists except the moving bodies, or moving sense-data. And neither Newton's law nor Einstein's law is, strictly speaking, a law of gravitation. They are both laws of moving sense-data, that is to say, formulae which tell us how the sense-data will move.

Now, just as in the past "forces" were foisted into Newton's law (by himself, be it said), so now the popularizers of relativity have foisted "humps and hills in space-time" into Einstein's law. We hear that the reason why the planets move in curved courses is that they cannot go through these humps and hills, but have to go round them! The planets just get "shoved about," not by forces, but by the humps and hills! But these humps and hills are pure metaphors. And anyone who takes them for "existences" gets asked awkward questions as to what "curved space" is curved "in."

It is not irrelevant to our topic to consider *why* human beings invent these metaphysical monsters of forces and bumps in space-

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time. The reason is that they have never emancipated themselves from the absurd idea that science "explains" things. They were not content to have laws which merely told them *that* the planets will, as a matter of fact, move in such and such ways. They wanted to know "why" the planets move in those ways. So Newton replied, "Forces." "Oh," said humanity, "that explains it. We understand forces. We feel them every time someone pushes or pulls us." Thus the movements were supposed to be "explained" by entities familiar because analogous to the muscular sensations which human beings feel.

The humps and hills have been introduced for exactly the same reason. They seem so familiar. If there is a bump in the billiard table, the rolling billiard ball is diverted from a straight to a curved course. Just the same with the planets. "Oh, I see!" says humanity, "that's quite simple. That *explains* everything."

But scientific laws, properly formulated, never "explain" anything. They simply state, in an abbreviated and generalized form, *what happens*. No scientist, and in my opinion no philosopher, knows *why* anything happens, or can "explain" anything. Scientific laws do nothing except state the brute fact that "when A happens, B always happens too." And laws of this kind obviously enable us to predict. If science has now substituted humps and hills for forces, then it has just substituted one superstition for another. But for my part I do not believe that *science* has done this, though some *scientists* may have. For scientists, after all, are human beings with the same craving for "explanations" as other people.

I think that atoms are in exactly the same position as forces and the humps and hills of space-time. In reality the mathematical formulae which are the scientific ways of stating the atomic theory are simply formulae for calculating what sense-data will appear in given conditions. They enable the physicist to foresee, for example, that in certain conditions a "wavy trail" will appear. But just as the weakness of the human mind demanded that there should correspond to the formula of gravitation a real "thing" which could be called "gravitation itself" or "force," so the same weakness demands that there should be a real thing corresponding to the atomic formulae, and this real thing is called the atom. In both cases the motive is a desire for "explanation." And since causation is commonly (though wrongly) supposed to be a principle which explains things, the forces and the atoms are set up as "causes." A cause, however, must "exist," otherwise how could it have any existent effects? So the forces and the atoms must "exist." In reality the atoms no more cause sense-data to appear than gravitation causes apples to fall. The only causes of sense-data are other sense-data. And the relation of atoms to sense-data is not the relation of

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cause to effect, but the relation of a mathematical formula to the facts and happenings which it enables the mathematician to calculate.

Sir Arthur says that the physical world has no colour, no sound, no taste, no smell. It has no spatiality. Probably it has not even number. We must not suppose that it is in any way like our world, or that we can understand it by attributing to it the characters of our world. Why not carry this progress to its logical conclusion? Why not give up the idea that it has even the character of "existence" which our familiar world has? We have given up smell, colour, taste. We have given up even space and shape. We have given up number. Surely, after all that, mere existence is but a little thing to give up. No? Then is it that the idea of existence conveys "a sort of halo"? I suspect so. The "existence" of atoms is but the expiring ghost of the pellet and billiard-ball atoms of our forefathers. They, of course, had size, shape, weight, hardness. These have gone. But our scientists still cling to their existence, just as their fathers clung to the existence of forces, and for the same reason. Their reason is not in the slightest that science has any use for the existent atom. But the *imagination* has. It seems somehow to explain things, to make them homely and familiar.

It will not be out of place to give one more example to show how common fictitious existences are in science, and how little it matters whether they really exist or not. This example has no strange and annoying talk of "bent spaces" about it. One of the foundations of physics is, or used to be, the law of the conservation of energy. I do not know how far, if at all, this has been affected by the theory that matter sometimes turns into energy. But that does not affect the lesson it has for us. The law states, or used to state, that the amount of energy in the universe is always constant, that energy is never either created or destroyed. This was highly convenient, but it seemed to have obvious exceptions. If you throw a stone up into the air, you are told that it exerts in its fall the same amount of energy which it took to throw it up. But suppose it does not fall. Suppose it lodges on the roof of your house and stays there. What has happened to the energy which you can nowhere perceive as being exerted? It seems to have disappeared out of the universe. No, says the scientist, it still exists as *potential* energy. Now what does this blessed word "potential"—which is thus brought in to save the situation—mean as applied to energy? It means, of course, that the energy does not exist in any of its regular "forms," heat, light, electricity, etc. But this is merely negative. What positive meaning has the term? Strictly speaking, none whatever. Either the energy exists or it does not exist. There is no realm of the "potential" half-way between existence and non-existence. And the existence of energy can only consist in its being exerted. If the energy is not

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being exerted, then it is not energy and does not exist. Energy can no more exist without energizing than heat can exist without being hot. The "potential" existence of the energy is, then, a fiction. The actual empirically verifiable facts are that if a certain quantity of energy e exists in the universe and then disappears out of the universe (as happens when the stone lodges on the roof), the same amount of energy e will always reappear, begin to exist again, in certain known conditions. That is the fact which the law of the conservation of energy actually expresses. And the fiction of potential energy is introduced simply because it is convenient and makes the equations easier to work. They could be worked quite well without it, but would be slightly more complicated. In either case the function of the law is the same. Its object is to apprise us that if in certain conditions we have certain sense-data (throwing up the stone), then in certain other conditions we shall get certain other sense-data (heat, light, stone hitting skull, or other such). But there will always be a temptation to hypostatize the potential energy as an "existence," and to believe that it is a "cause" which "explains" the phenomena.

If the views which I have been expressing are followed out, they will lead to the conclusion that, strictly speaking, *nothing exists except sense-data* (and the minds which perceive them). I fully accept Sir Arthur's assertion that the star is in exactly the same position as the atom. "An electron," he says, "is no more (and no less) hypothetical than a star." This is undoubtedly true, if by a star we mean something other than the "disk of light" or other sense-data which we perceive. And if the atom is a fiction, so is the star, and for exactly the same reasons. What really exists is the "disk of light" in the one case and the "wavy trail" in the other. The rest is mental construction. But this does not mean that the conception of the star or the conception of the electron are worthless or untrue. Their truth and value consist in their capacity for helping us to organize our experience and predict our sense-data.

Sir Arthur cautiously holds back from using the expression that the physical world of atoms is "real," or that it is more real than the familiar world of sense-data. But he calls the latter a world of "illusions" and "subjective interpretations," which surely amounts to the same thing. And I do not think that there can be any question but that science has been guilty of encouraging the plain man to think that the world of sticks and stones, of sounds and colours, is somehow unreal, and that the real world consists of a whirl of atoms. In so doing science has gone outside its sphere, and has done a disservice by appearing to rob the world of its values and to insist that most of what is beautiful and admirable is mere illusion. But if the line of thought which I have endeavoured to outline in

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this article is correct, then any such deduction from the discoveries of science is false. Chairs and tables and stars do really exist. They are exactly what they appear to be, coloured, spatial, resounding objects. Moreover, this familiar world is the only real world, the only world which really exists.

CARTESIAN MECHANISM

S. V. KEELING, M.A., D.-ès-L.

I

1. THOSE having a detailed and first-hand knowledge of Descartes's work seem agreed that it was highly original, genuinely critical and of permanent importance in the history of thought. And though they would differ in opinion on what are the reasons best advanced in support of their estimate, a majority would seem to regard the "Cartesian revolution" as summing up what is most meritorious in Descartes's philosophy and most lasting in his influence. They would find Professor E. Gilson speaking their mind when he declares, "Sur ce qu'il y a de nouveau et de strictement original dans sa pensée, aucun doute ne saurait subsister. Descartes est la revendication personnifiée du mathématisme universel. Là est sa grandeur." On the "novelty" and "originality" of this part of his work there can be no question. But when it is pointed out that novelty and originality can quite as well be claimed for what is unfounded as for what is founded, for what is false as for what is true, Descartes's admirers are inclined to feel that something more than what is novel and original should enter into the evidence they offer for their estimate. Now it is significant that M. Gilson does not assert more for the "mathématisme universel," and that Professor J. Chevalier denies that Descartes's importance does centre in this part of his philosophy. And though neither, so far as I know, has brought criticism to bear exclusively on this particular matter, the caution of the one and the denial of the other appear fully justifiable. The position is curious. That the constitution and behaviour of all natural bodies, animate and inanimate, are explicable completely by the principles of geometry and mechanics is of the essence of Descartes's Natural Philosophy. Yet this principle of mechanism which is extended so felicitously from one to another region of Nature, itself contains the seed of its destruction.

2. The 'revolution' Descartes initiated, the most radical and influential one between Aristotle and Kant, stands for the replacement of faith without demonstration for faith in demonstration. It exacts that whatever be accounted knowledge should provide complete rational satisfaction, from which it follows that whatever is truly knowledge is certain and is demonstrably so. "Probable knowledge", then, expresses a contradiction in terms, for probability is a characteristic of hypothesis and not of knowledge. And this

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demand for rational satisfaction, when restricted to the explanation of all that is existent nature, is simply the principle of mechanism; a fulfilment of that demand under the same restriction would consist in a mathematical physics that is certain.

In forming a conception of what this demand implies respecting the character of all natural knowledge, it is desirable to observe at the beginning how that which Descartes calls "physics" is distinguished from what he calls "Philosophy of Nature", and how both stand to his "First Philosophy" or metaphysics. "My whole physics", he wrote to Mersenne, "is nothing but geometry." Physics is "another kind of geometry", one he describes as "concrete" in contrast with "abstract" (or Euclidean) geometry. He does not regard his "physics" as furnishing knowledge of existent nature; this is provided only by "Natural Philosophy". And "physics" is not differentiated from geometry by its method, but solely by the fact that geometry treats of only certain natures (the properties of Euclidean space), while "physics" treats of other (kinematical) properties. Thus, he adduces his researches into the constitution of salt, fire, snow, light, the rainbow, and the various theorems in the *Dioptric* and the *World* as fair samples of physical results. "Physics" denotes for Descartes, then, a totality of such results so co-ordinated and arranged as to exhibit the deducibility of any one from certain others. Applications of his new method enable him to elaborate successively an analytical geometry, a celestial physics, a terrestrial physics, a mechanistic physiology and a psycho-physics. Each of the branches resulting from those applications is to be regarded, however, as no more than a systematically developed and internally coherent description or a *hypothetical* explanation of a certain field of concrete objects. Each branch is a distinct and independent ensemble. And so long as the demand for ultimacy in analysis and certitude in knowledge is held in abeyance, each ensemble is to be accepted on its own merits and without reference to any metaphysic. Thus we find through his physical writings that, by assuming the principles of mathematics, suitable units of measurement, laws of impact and the possibility of an unlimited redistribution from time to time of matter in motion, Descartes is able to propose useful working hypotheses of the rotations of celestial bodies, the refraction of light, the functions of vision and the nervous system, the circulation of the blood, the causation of emotions and of the transactions between selves and their bodies generally.

3. But he maintains that it is the business of science to accomplish more than this, and believes that he himself has done so. He is not content to offer a "universal physics", but insists on furnishing a Natural Philosophy. It is not an ordered ensemble of working hypotheses or hypothetical explanations that he must provide, but

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nothing less than a unified body of certain and ultimate knowledge, sufficient and necessary for explaining the character of objects and occurrences existent in various regions of Nature. In other words, what the principle of rational satisfaction exacts from science is knowledge and not merely comprehensive and serviceable formulae, unaccompanied by an 'interpretation' establishing the "cash value" of their terms. If it is regions of Nature as really constituted that the knowledge is to be 'of' (and not merely certain conceptual substitutes found convenient in scientific practice), then Descartes's insistence on the need of justifying our "knowledge of nature" (if it be justifiable) is in principle correct and enormously important. And the corollary that unless it be shown to be justified then what we called knowledge is no knowledge at all, but at best self-consistent hypothesis, is as pertinent to the natural science of to-day as to that of the seventeenth century. Although there can be no doubt that the particular metaphysic which Descartes thought would 'guarantee' his natural science, fails completely to do so, his realization of the need of *some* supporting metaphysic is indubitably right, if it is agreed that the business of science is to attain knowledge. It does not follow, however, that the relation of the 'supporting' metaphysic to the 'supported' science would be of the simple character that he supposed.

4. Descartes plainly does not intend his metaphysic to be a mere appendage to his physics. Without metaphysical 'justification', his physics, we saw, is but a connected group of working hypotheses—a set of 'possibly true' explanations, and his method is no more than a set of injunctions lacking authority—mere personal memoranda about his own preferred way of working. So this is the situation. The physics itself cannot justify its own essential mechanistic principle, nor can it warrant the assumptions of the method that underlie that principle, namely, (i) that there exists *in rerum natura*¹ entities formally similar to those Descartes called "simple natures"; (ii) that if such do exist, that they are identical with those which

¹ "Simple natures" are not ideas but essential 'ontal' elements, constitutive and explanatory, presupposed throughout the whole of Descartes's *Metaphysics* and *Natural Philosophy*. The theory of representative perception is, indeed, indirect evidence of this, for, eliminate simple natures, and there is nothing left to be represented in distinct idea, or misrepresented in confused ones. Commentators appear to think it sufficient to discuss simple natures when treating of his Method, and omit all reference to them thereafter. This seems to me regrettable, even though they but follow Descartes's example. They are mentioned in no other work than the *Regulae*. Yet the doctrine of innate ideas and the epistemology of the *Meditations* presuppose the existence of simple natures. Descartes's failure to carry them explicitly right through his metaphysic and to work out his theory of them in sufficient fulness seems to be mainly due to his later interest being dominated by difficulties of an epistemological rather than an ontological character.

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Descartes indicated in his own list, and (iii) that his list is exhaustive. Nor, on the other hand, can the method (iv) justify its own prescriptions, or (v) itself establish that our actual cognitive operations are of the character described in the *Regulae* and the *Discourse*. Descartes, of course, considers he has provided justification in the metaphysics for these five assumptions of his physics and method. But the part of his metaphysics from which their justification is supposed to follow, there can be no doubt, calls to be rejected. And from this, it follows, that the most favourable verdict that can be returned for his Natural Philosophy is that of 'not proven'. But there is good reason to maintain (and this seems to be less often perceived) that even were his metaphysics acceptable, the Natural Philosophy would still have to be rejected. The remainder of this article will be devoted to establishing this assertion.

It is now evident that Descartes's distinction between physics and natural philosophy does not consist in a difference in the material import of their constituent propositions, but solely in the assertion that the propositions of "Natural Philosophy" are all metaphysically certified while this is true of no proposition in "physics". When the principles of physics (the laws of motion, and thence, all less general laws) are shown to follow with necessity from certain conclusions of the metaphysic (Natural Philosophy thus exhibited as a prolongation of metaphysics), the certainty of the latter confers on the physics previously and independently elaborated an *existential* import which in itself it does not contain and cannot provide. Thus Descartes's Natural Philosophy is a *part* of his metaphysics - i.e., a part of that ontological account of the universe, in a sense in which the physics is no such part.

5. Now in order for our explanations to be rationally satisfying and to rank as constituent parts of Natural Philosophy and not merely as parts of physics, one condition to be complied with must be that the concepts we select as 'primitive' (*viz.*, those in terms of which scientific data are to be described and scientific results are to be formulated) must all be wholly intelligible and ultimate ones. In the development of our natural knowledge, then, we must never have recourse to a term whose character is not clearly comprehended and which cannot be demonstrated (by metaphysics) to be literally ingredient in the actual constitution of existent Nature. One immediate consequence, then, of Descartes's application of his universal method to that part of the existent which is Nature will be the elimination of all 'occult' qualities, faculties and "substantial forms", and their replacement by certain "simple natures". For no body of natural knowledge that is certain can afford to include or depend upon such unquestionably confused concepts as those of the "heaviness" of bodies, the "forms of fire", a "faculty of burning", a

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"vegetative soul"—all essential to scholastic physics; nor even those more familiar sensible qualities which uncritical perception inclines us to regard as trustworthy. These are, one and all, 'irrationals'; the concepts such phrases express are so confused that no clear and certain knowledge can be developed out of them. And the "simple natures" which are to replace these confused notions are simple in two senses, *viz.* (i) none is complex (therefore the unique character of each can be completely comprehended by a single intuitive act, and is not known discursively, *i.e.*, analytically and progressively, through knowledge of their parts or factors, for they have none); (ii) none is derivative (therefore the unique character of each cannot be defined in terms of others, and the number of such natures can never be reduced).

II

6. Descartes does not seem to have given an exhaustive list of the natures which he considers promise intelligibility for the conclusions in which they appear as terms, and for the conclusions deducible from premises in which they so appear. He regards it sufficient to give (*Regulae*, vi, xii) as examples of the ultimate essences materially constitutive of existent Nature those named by the words "independence", "universality", "equality", "causality", "straightness", "extension", "figure", "motion", "substantiality", "existence", "duration" and "unity". Intuition of 'what it is' to be one and another of these is a prior and indispensable condition for the attainment of any natural knowledge. For natural philosophy is to be knowledge of actual Nature—not of a possibly (but not actually) existent Nature—and Cartesian metaphysics is to establish with certainty that actual Nature is made up of complex unities composed of just these ultimate and simple essences. Such then are the physicist's 'alphabet'; by recourse to one and another of them he is to spell out the significance of all the variety existent in Nature. The assumption which it is one of the objects of Descartes's metaphysics to justify is that natural unities would not possess the character they do unless there really existed *in natura* simple natures of precisely these kinds.

The exclusion of determinable qualities of sense (colours, sounds, temperatures, pressures, etc.) from his list of simple natures appears at first sight a somewhat arbitrary decision on Descartes's part. For such sense-natures also are "simple" in the same two respects as the simple natures he selects. The exclusion of sense-natures is therefore significant. Like Descartes himself, all his commentators and expositors I have read are content to declare that sense-qualities are excluded on account of their "confusedness", and that from confused terms no clear science can be developed.

7. But in a philosophy in which "confusedness" plays so important a part, there is good reason for insisting that the concept of confusedness itself should not be allowed to remain confused, but that pains should be taken to make it quite clear. For plainly confusion in perception is one thing, confusion in what is perceived quite another. Descartes does not, like so many of his empirical successors, confound perceiving with percept. To be sure, if percept be confused, perception of it will be so, but we cannot infer from our perceiving being unclear that what is 'given' to be perceived must be so. And Descartes certainly seems to regard both, perception and percept, as confused. What can be meant, then, by maintaining that all sensory qualities of percepts are confused? Neither Descartes nor his commentators explicitly deal with this question. But from the doctrine of simple natures elaborated in the *Regulae* we can find material for an answer. And his *Geometry* and the ensemble of his physical treatises provide cumulative evidence which Descartes would probably regard as justifying the exclusion. For the use of simple natures in these writings shows unmistakably that *the natures he names "simple" have a characteristic not possessed by sense-natures*. Both kinds of nature are determinable, non-complex, non-derivative, but there their similarity ends. All natures (simple or complex) suitable to serve as terms of explanation are either "absolute" or "relative" in relation to the series of propositions in which they appear and which constitutes the *demonstration* of the explanation in question (cf. *Regulae*, vi, xii). And the "absolute" term of any such series if not also a "simple nature" must be one that can be deduced (in another series of intuitions) from one or more natures that *are* "simple"; the "absolute" term appearing in that latter series as not an "absolute" but a "relative" one, *viz.*, in relation to the absolute term which is a simple. Now in what consists the clearness of simple natures and the confusedness of sense-natures (as distinct from clarity and confusion in the *perception* of them, respectively) can be made evident by considering Descartes's view of the 'relativity' of relative terms, and the determinable character of relative terms and sense-natures alike. How is it that the confusedness of sense-natures prevents our elaborating bodies of science from and about them? The particularity and specificity of natural bodies is expressed quite as *definitely* by the determinateness of sense-natures as it is by the determinateness of its simple natures, the former 'announcing' the observable presence of those bodies, the latter defining their real character. The confusedness of sense-natures, then, cannot consist in their being indeterminate, for they are plainly as determinate in their way as simple natures are in theirs. Why deductive sciences can be constructed from and about the latter, but not from and about the former, would appear to be because *all natures that are important for deduction are such as*

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fall into series each of which contains both 'absolute' and 'relative' terms, while natures from which a science cannot be deduced are such as cannot form series each containing 'absolute' and 'relative' terms. The variable values of a 'relative' term are always expressed in relation to some 'absolute' term taken provisionally as invariable. If our natures are "simple" (or complex ones wholly definable by simples) then any of them is suitable to serve as the absolute term of a series whose other terms are all "relative", and there are many relations discoverable connecting the former with the latter. A mechanistic physics consists essentially of propositions stating such functional variations and relationships. Now sense-natures are not of this kind. No selection from them will form a series of 'absolute' and 'relative' terms. There can be no relative terms among sense-natures because there are no absolute ones. No doubt, since each sense-nature is determinable, the determinates falling under it will be related *inter se*. But this shows only that they are *variable* natures, not that they are "relative" in Descartes's special sense. It does not show that they can be related to some "absolute term" which is also a simple nature, or which can, in turn, be related to another which is a simple nature. Consequently, systematic bodies of science (geometry, physics) expressing relations between determinate values of "absolute" terms and correlative values of "relative" terms, *can* be deduced from simple natures, but *not* from sense-natures. Hence, there are no sciences of colours and sounds as such, parallel with the sciences of shapes and motions. The simple natures to which bodies in motion are reducible thus make possible the discovery of laws connecting, *e.g.*, their volumes with their motions, in a way in which laws cannot be discovered connecting the colour, sound, temperature which sensibly appear as belonging to those moving bodies. How far-reaching are the consequences of this distinction between simple and sense-natures we shall see most fully when considering the views Descartes eventually regards as established concerning the nature of our Natural Knowledge and the character of all material existents and their changes.

8. If we allow provisionally all these requirements of his method, the way is open for Descartes to construct a thoroughgoing mechanistic account of Nature. This accomplishment depends upon two 'identifications', *viz.*, the reduction of all matter to space and the reduction of all vital activity to locomotion. Nature is to be exhibited as being in every respect and in every region one vast mechanism. All diversity in Nature is purely formal and quantitative. Accordingly, it contains no 'irrational' factors, but is so constituted as to be completely intelligible. What is regarded as an irreducible variety of chemical elements and modes of synthesis in inorganic chemistry are really so many parts of three-dimensional space occupying deter-

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minate though relative positions and capable of a variety of motions differently directed and varying in velocity. Likewise, there are no ultimate qualitative differences among organisms. No property that an organism possesses persistently and independently of our perception will resist exhaustive analysis into a combination of some or other geometrical and kinematical 'natures'. So Descartes's biology, as well as his physics, is thoroughly mechanistic. And this is likewise true of those organic bodies that embody selves, *viz.*, human bodies.

III

9. It remains to examine critically the consequences following from these two wholesale reductions. In the first place, it follows that the identification of matter with space is to be regarded not only as a convenient postulate of physics but as a literal truth about the most ultimate character of all Nature, therefore as being a conclusion of metaphysics. To point out then, as we certainly may, that this identification (or substitution) has made possible more, and more important, results in physics than any other postulate except that of the conservation of energy, contributes just nothing towards establishing the certainty, or even the probable truth, of that metaphysical conclusion.¹ We may admit that so thorough a geometrization of matter has the advantage of enabling the physicist to avoid all dependence on "occult" qualities, powers, faculties or "substantial forms" in his explanations. But the value of this attainment is gravely compromised by the condition under which the avoidance is effected. The geometrical and kinematical natures into which Nature is analysed may well be all completely intelligible. But Descartes's account of the partitioning of the single substance that is all space into an array of separate, individual "bodies" (*res extensae*) persistently identical and interacting one with another, is surely as unintelligible as any "substantial form"! For the reduction of matter to space alone entails neither the existence of a plurality of particular bodies nor movement among them. The existence of a mode, it is true, entails the existence of its substance; but the existence of a substance does not entail that it has modes

¹ The ultimacy claimed for this metaphysical conclusion has, for its epistemological counterpart, the view that the sciences of pure mathematics and rational mechanics are *parts of* Philosophy. The facts that the laws of these sciences are adequate to explain are not phenomenal, but 'ontal'; to know these laws is thus to know the ultimate constitution of one part of the universe. Descartes's position is not that of an 'epistemological idealist', for though he holds that we are never directly apprehensive of Nature (in perception or in conception), there is a Nature independent of those ideas for its character and existence, to which they refer. The fact that there exists an independent Nature in this sense it was one of the principal aims of his metaphysic to establish.

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(cf. God). And further, motion on the part of a mode entails that the mode is extended, for a mode to be of a certain shape or of a certain size does not entail that it must move. The motion of moving bodies, then, does not stand to the ultimate attribute of which those bodies are modes in the same relation as their determinate shapes and sizes stands to that attribute (*viz.*, spatiality). Hence for Descartes, both the particularity and the motion of natural bodies is extraneous to space. Though determinable into a manifold of determinate parts ("bodies"), space itself is not such a manifold. Its determinable character does not entail its actual determination into just those particular volumes (more or less regular cubes, spheres, etc.), each "constant", admitting of neither expansion nor contraction, which this, that and the other body we perceive really are, according to Descartes. The possibility of a partitioning and diversification of a homogeneous and individual space into a plurality of volumes each having its definite and constant quantity therefore remains to be demonstrated. Unless this is done, the reduction of matter to space is a futile proposal. It cannot be even a 'convenient postulate' for physics, for physics requires a plurality of diverse *res extensae*, and not merely an individual, homogeneous space. And even more futile would it be to propose the reduction as a conclusion acceptable to metaphysics.

10. So the partitioning of a homogeneous space into separate and diverse bodies, and the occurrence of various motions on their part, must be due to something besides the properties of space itself. And it is a stroke of creative genius in Descartes to have attempted to explain *both* numerical diversity (partitioning of space) and all types of change (*viz.*, of state, place and behaviour) by means of *one* principle. Since space is static, it cannot diversify itself; neither can it generate motions. And until space is diversified, there is nothing *to* move. Motion therefore must be imported into space, which, for Descartes, means that it must be "imparted" by God's volition.

But what is this language to mean? To be sure, the 'importation' or the "inpartation" cannot be imagined, and we must not try to imagine it. But if this mechanistic metaphysic is to be rationally satisfying, the 'importation' must be conceivable, clearly and distinctly so. But in vain do we try to conceive it. So, though the attempt to explain numerical diversity, formal dissimilarity and change of bodies by means of one and the same 'nature' (motion) is a stroke of constructive genius, here again the value of the attempt is hopelessly compromised when the condition under which the diversity and change are asserted possible turns out to be one that we cannot clearly conceive. And this inconceivability announces further confusions, and indeed inconsistencies.

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If we try the expedient of supposing 'God's imparting of a constant quantity of motion' to be only a seventeenth-century theological way of expressing what we to-day should mean by saying that it is 'just an ultimate fact' that where space is there is motion, actual or potential, then four things would follow. (i) The 'constancy' in quantity of motion in Nature (which Descartes claimed to 'deduce' as a necessary consequence of the constancy of God's will) will also have to be 'just an ultimate fact'. (ii) The 'ultimate fact' of motion in the world will be a 'brute' fact, and as such will express a limit to the demand of reason for satisfaction. And this should mean that its 'ultimacy' is self-evident. But if we reflect on the connexion between 'motion' and 'space' do we not find that motion is less ultimate than space? For it depends upon space, and not space upon it. And do we not also find that their connexion is neither necessary nor fully intelligible? (iii) To speak of "imparting" a constant quantity of motion to that which is not already and intrinsically 'in motion' is to fall back on a metaphor that is both vague and significantly applicable only to a 'microscopic' system, not to a 'macroscopic' one. For if it can mean anything to say that a constant quantity of motion is "imparted" to all space, it certainly does not mean anything which explains how all space should be partitioned into an array of spatial particulars. If, on the other hand, it is a microscopic system into which Descartes means motion to have been imparted,--so that what is declared "constant" is not an undistributed total of any sort, but a totality made up of *particular* movements, various distributed throughout all space,—then his 'explanation' involves a vicious circle. For, even theoretically, there could be no distribution of particular motions apart from the existence of particular bodies (modes of space) whose motions they are. Hence this interpretation presupposes a plurality of "bodies" existent. But it is motion that is supposed to effect the splitting up of the homogeneous substance that is all space *into* such spread of particular "bodies". Turn it about, then, as we may, this phrase of "God's imparting motion to matter" seems devoid of a meaning that is at once clear and consistent with Descartes's other assertions. The diversity and the identity implied in the conception of a multiplicity of individual bodies in motion turns out to have been only postulated; their existence has not been demonstrated, even within the provisions of his own theory of what demonstration consists in.

II. From this single space modified into an indefinite number of volumes ("bodies"), Descartes deduces three consequences of far-reaching importance; *viz.*, that there are no atoms, no vacua (empty spaces) and no bodies that contract or expand. Just as Nature conserves throughout time the total quantity of motion originally transmitted to it, so each body conserves throughout time, without

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increase or decrease, that definite quantity of space which defines its volume. From Descartes's peculiar conception of matter, these three consequences follow logically enough. But, we shall see, when the implications of the notion of a persistent and interacting natural body become explicit, as they do when he attempts explanations of relatively determinate types of physical behaviour, he is compelled to introduce explanatory characteristics incompatible with the purely formal determinations of extension and motion.

Since there is one dimension which is 'the' dimension of each body, no body can literally expand or contract. Yet it is convenient to speak of bodies contracting and expanding, and a suitable meaning for such speech can be provided within the terms of our purely geometrical Nature. To speak of a gas or a sponge as "expanded" presupposes that not one but many bodies are in question. The particles of the body "expanding" have been separated by greater distances than those which separated them previously. Consequently, the interstices between those particles have become filled with *other* matter. Thus in expansion there is no alteration in the real, defining extension of the "expanded" body, only a displacement of its component parts. And that a vacuum is impossible is evident directly matter is identified with space. The conclusion that there can be no region of space unfilled with space is self-evident. All we may mean by "empty space" then is space unfilled with its previous or with expected content. And since there are no 'gaps' or 'interstices', space is a continuous *plenum*, and infinitely divisible. Therefore there can be no atoms, for an atom, though imperceptibly small, would have some extensity, and so set a limit to the divisibility of space.

12. Now such a literally absolute geometrization of matter as this shows that, quite apart from Descartes's failure to explain individuation of space into bodies by motion, any possible attempt to do so *must* end in failure. For there is nothing in the merely determinable character of space to preclude any number of identically determinate modes from co-existing coincidentally. Given, say, a cubical or spherical body of definite extensity, there could be any number of other cubes or spheres simultaneously coincident with it, any one of which may as legitimately be accounted a 'particular body' as any other. But one characteristic of everything that is 'a body' is that it excludes the simultaneous presence of another. Yet argument by congruence of properties in geometry proceeds on the assumption that any number of coincident figures can co-exist in the same space. So even had Descartes's account of the partitioning of space accounted satisfactorily for the *particularity* of particular *res extensae*, he would still be far from having fulfilled the minimum requirements of a theory theoretically capable of explaining the simplest types of mechanical change occurrent to natural bodies. For all the reduction

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really allows him (as distinct from what he *supposed* it gave him) is a static 'spread' of a quality that *could* be split into a number of volumes having definite quantity and a definite boundary, each of which is necessarily of infinite divisibility and each of which *could* stand in different spatial relations to others at different dates. With so little as this provided, it is plainly impossible to explain even so simple a natural occurrence as a particle moving in a straight line. For even though motion is "relative" for Descartes, it is the *same* particle that must be differently situated at different dates, *i.e.*, the determinate quantity of extension and determinate configuration which define the particle originally must persist through the time the body is said 'to be moving'. Such persistence is as essential as particularity and determinateness to the individuality of 'the' body. But if we add to space the further 'static' characteristics of determinateness and particularity, still 'persistence' cannot be defined by them. This character required in order that a *res extensa* should not merely 'be so-and-so' but should "remain constant" throughout indefinite time, is unavoidably introduced by the further, non-geometrical consideration that motion in time occurs to *res extensae*. But again, though kinematics requires persistence in particles, that persistence cannot be deduced from either simple nature, "motion" or "extension". To be sure, "unity" and "duration" are equally simple natures with these, and Descartes's metaphysics assures us that both pairs express genuine characteristics of Nature. All four are distinctly conceivable. Unity, however, is one thing, duration another. And 'to preserve the same unity throughout duration' is other than both. Yet it might be held that from 'unity *and* duration', 'unity *in* duration' is deducible. If, then, this is Descartes's real justification for supposing a plurality of particular, determinate and persistent bodies for his kinematics then we may agree that the supposition is provided for by the principles of his metaphysic. But it is not provided in the way Descartes himself asserts, for it is not provided by the existence of God and his volition, nor by space alone, nor by space and motion alone, nor by all together. Hence the declaration, "Qu'on me donne l'étendue et le mouvement et je vais refaire le monde" is, even for a Cartesian, an impossible boast.

13. Not only is the way in which Descartes tries to establish the persistence of *res extensae* unintelligible and unacceptable (though it can be established intelligibly and legitimately), but he speedily forgets the purely geometrical character of his Mechanism in his physical treatises, and assigns further characteristics to *res extensae* which cannot be justified from the provisions of the "mathématisme universel". For though the reduction of matter to space be so interpreted as to allow for persistent particulars, it cannot be interpreted to allow for a matter consisting of particulars that are relatively

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active and passive in their transactions. Yet, as Leibniz pointed out, the language of impact used by Descartes in his physics and presupposed by his laws of motion, involves more than persistence. It requires also 'resistance', and this requires 'force' or 'energy' of some kind as its ground. It was probably in his anxiety to avoid anything that could be suspected of being a "substantial form" that led him to regard motions as occurring without expenditure of energy. Potentialities, however, must be included among the minimum of explanatory characteristics, besides determinable natures. For in his physics, Descartes speaks of motion being *transferred* from one body to another on the occasion of their "impact" (*choc*) in a manner that certainly implies that bodies expend energy. It is plain that "motion" is being used here equivocally; *viz.*, as the *cause* of a given change of place (*i.e.*, as "force") and as *the change* itself (*translatio*) which is effect. And although we do not commit the all too easy blunder of *imagining* 'microscopic' motions on the analogy of 'macroscopic' ones (*e.g.*, like the sensibly apparent movement of a marble travelling along a surface), still, the double sense of motion as "impelling force" and as "change of situation" remains. What then *has* God "imparted"? If only capacity or motive force, then its actualization into discrete motions is not, and cannot be, accounted for by a wholly geometrical Nature. If it is actual motion, then bodies are devoid of energy and it is senseless to speak of "impelling forces" and change due to "impact", for this will be the language of substantial forms. If both have been "imparted", then motion is not a simple nature and not a nature distinctly conceived, but no more than two images (*e.g.*, of 'muscular effort' and 'sensible movement'), therefore emphatically something confused.

1.4. For these reasons we should doubt gravely whether Descartes's metaphysics of Nature could give the complete rational satisfaction he promised, however felicitously the geometrization of Nature might work out in detail. But as we pass from bodies of less to those of greater complexity in organization and function, we find the geometrization ill fitted to explain the concepts through which biological changes are described. From the first major identification of matter with space, a second great reduction follows. All variety and complexity exhibited in the behaviour of *animate* bodies, or inferable from it, is identified with sets of integrated motions occurrent in relatively permanent groupings of *inanimate* bodies, *viz.*, in the animal's organs. This reduction of vital activity to movements in space is, of course, already contained in the methodological postulate and metaphysical principle that all change is 'mechanical'. Mechanism therefore commits Descartes to explaining to the veriest detail every type of change occurrent in every kind of living body (*e.g.*, anatomical, physiological, habitual, instinctive, sensory and imaginative) in

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terms of reactions that are movements on the part of organs or glands or of fluids such as the blood or "animal spirits". The anatomy and physiology of this Natural Philosophy are thus all in line with, and extend, its celestial and terrestrial physics. The animate body or "machine" is differentiated from inanimate matter in no essential respect. No "vital" or "organic" characteristic may be introduced, for this would be to deliver up natural science to a detested "substantial form"! Animate body differs from inanimate only in involving the more frequent occurrence of regular kinds of interaction between its parts, hence in involving a much greater degree of interdependence between those parts. The modes of reaction characteristic of organic bodies, usually involving chemical natures—flexion of limbs, contraction of muscles, pumping by the heart, digestion by the alimentary canal, secretion by the liver, etc.—may well be mechanically explicable along lines analogous with those by which expansion and contraction in inanimate bodies were explained. So, too, bodily fluids may be susceptible of treatment analogous to that of light and heat. Whether such changes and more complicated ones are explicable 'mechanistically' is matter of dispute among contemporary physiologists. But even the 'mechanists' among them would require a much more elaborate and less 'pure' form of Mechanism than that which Descartes envisaged. Descartes, however, cannot dispense with such physical characteristics as resistance, impact, expenditure of force, and these, we saw, are but foreign currency in a wholly geometrical Nature.

The objections to Cartesian mechanism culminate and show up most convincingly in his account of those animate bodies that embody selves. His psycho-physics is principally concerned to explain the bodily consequences of volition (*i.e.*, the self's apparent action on its body) and the causation of perceptive and affective experience (*i.e.*, the apparent action of matter on the self). The explanations require that, in the latter case, after a series of nervous excitations have occurred, a mechanical impress is made on a central physical organ (the pineal gland), whereupon there ensues an event that is not physical but mental. How this should be possible if matter and mind are totally disparate and not interactive, we need not now inquire. In one particular class of cases, *viz.*, human bodies, a connexion more than temporal and less than causal does, Descartes maintained, relate mental states and bodily changes. His explanation does enable us to substitute for the imprecise question, "How can there be a 'substantial union' of a conscious substance with a mode of matter?", the seemingly preciser one, "How can a conscious substance be 'continually present to' the pineal gland?" But the reformulation facilitates no solution. Is not the "presence" as unintelligible as the "union"? Since the self is not extended or spatially situated, to

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speak of it as being "present to" the pineal gland, or of that organ being "the seat of the soul", is to speak in misleading metaphor, since its meaning rests on an analogy whose terms are perforce both spatial.

15. The implications of the conceptual reduction of matter to space on the one hand, and the implications of what is taken to be disclosed in sense-perception on the other, instead of being mutually supporting, openly declare their incompatibility, and therefore demand the rejection of mechanism. Descartes regards the existential and qualitative distinctness of self and body to be a distinction in fact—a "real distinction" and not a "distinction of reason". A metaphysic that is rationally satisfying must therefore preserve in all its particular explanations the full import of their distinction. Now, that the two partners in this substantial union are necessarily distinct (in character and existence) is certified by resort to sensation. But sensation, on Descartes's view, is possible only because self is united with a body. Their "union" however is not distinctly conceivable but only confusedly felt. This being so, one wonders how any piece of certain knowledge could be based upon it. Descartes certainly maintains that sensations really occur, he denies only that they are ever clear. The sense-natures sensed in those states are intrinsic to them as "confused" states, therefore the qualitative characteristic must be taken seriously. But, although the introduction of embodied selves is a necessary condition for explaining the *de facto* 'qualitas' of sensation, it is not a sufficient one. For that 'qualitas' can be explained neither by matter nor by mind. There is no intelligible relation between moving particles and the 'qualitas' on the one hand, nor between activities of pure conception and volition and the 'qualitas' on the other. Since natural bodies are wholly formal and quantitative, how should they appear to be characterized as they are not? And since the only cognitive activity of the self is conceptual, how should the self be able to "suffer" such confused affections? The confusedness of sensory awareness cannot be accounted for by the nature of either partner in the transaction, so its occurrence must be regarded as inexplicable or as 'an ultimate fact'. Such a result must clearly be a grave defect in a metaphysic designed to provide rational satisfaction. Since the 'qualitas' exhibited in sense-natures is essential to sensations, and since the occurrence of sensations constitute the situations that evoke pure thought activity, Descartes may agree with Kant that all knowledge begins in sense-experience, but not that sense-experience ever contributes anything to that which is known. And since sense-natures are due neither to the self nor the body, but to the *embodiment* ("substantial union") of self by matter, sensation must be regarded as 'emergent', and (in common with the 'embodiment') as

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totally unintelligible. So much Descartes is compelled to admit. We know *that* self and body are connected, but not *how* they are connected. And here, surely, inconsistency overreaches itself, for, in his letter to Elisabeth (1643) Descartes had assigned to "the union of soul and body" a place among the simple natures! What we have, indeed, under cover of a simple nature, is the undisguisable presence of a full-blown "substantial form", entrenched in the very citadel of Cartesianism.

In the end, then, the collapse would seem as complete as collapse could be. Is it not peculiarly ironical, therefore, that a majority of Descartes's admirers should select his universal mechanism as attesting his principal merit in metaphysics?

GOETHE'S PHENOMENOLOGICAL METHOD

PROFESSOR FRITZ HEINEMANN

Eleusis servat, quod ostendat revisentibus.

"Ich denke auch, die Behandlung ist gut; es ist Methode darin."

(To ECKERMANN, February 1, 1827.)

NOTHING makes the occupation with the great minds of the past more attractive than the fact that with the change in the whole situation of the present time, with the maturing of one's own personality, they appear in a new light and present themselves in rejuvenated shape. I had a curious experience of this kind, when it occurred to me during the investigation of some phenomenological problems, that Goethe, though ignorant of the name, had employed a definitely phenomenological method. In occupying myself now with the revealing of this fact, it will be my leading principle to understand Goethe through himself, and I shall try not to adapt his meanings to my own theories. This is a principle which many of the critics have transgressed, notably the author of the most thorough analysis yet undertaken of Goethe's *Urphänomen*.¹ I cannot start from this very able writer's premise that Goethe's *Urphänomen* is identical with the Platonic Idea, nor can I assume with her that his method was not empirical but idealistic, since it produced its object as an Idea. We must forget both Plato and the contrast of empiricism and idealism; for what Goethe meant by the *Urphänomen* can only be cleared up from the whole of his teaching concerning phenomena. What, then, was Goethe's phenomenological method?

We shall understand it best if we contrast it with other modes of procedure to which it is opposed. So far is Goethe from finding his starting-point in pure thought, and educing its object from it, that he scoffs at men who begin with a theory and only afterwards go on to examine experience. "Theories," he says, "are usually the rash utterances of an impatient intelligence, that would gladly be done with phenomena, and so puts in their place images, concepts, even words. One suspects, one even sees, that this is a mere make-shift; but are not passion and partisanship always lovers of make-shifts? And rightly so, since they need them so thoroughly."²

¹ Elisabeth Rotten, *Goethes Urphänomen und die platonische Idee*. Giessen, 1913.

² *Goethes naturwissenschaftliche Schriften*, ed. by Steiner, Vol. IV, Part 2, P. 376; referred to subsequently as St.

"Theory as such is of no value, except in so far as it enables us to believe in the interconnection of the phenomena."¹ The mind does not apprehend the essence of things, but it substitutes symbols, images, concepts, for reality, which in themselves are senseless if they do not refer to what is real. Only for him who is in possession of the phenomena is theory of value as revealing their connections.

Hypothesis, as the foundation of theoretical physics, as it was first developed by the atomists, falls under the same condemnation. "Hypotheses are lullabies with which the teacher soothes his pupils to sleep. The thoughtful and faithful observer grows increasingly conscious of his limitations, for he perceives that the more knowledge extends the more numerous are the problems that emerge."² "To rid the human mind of an hypothesis that has unduly restricted it, forcing it to observe erroneously and to combine falsely, to muse instead of seeing, to sophisticate instead of judging, is already to render it an inestimable service. Henceforth it sees the phenomena with greater openness of mind, in other relations and interconnections, orders them after its own manner, and once more gets the chance to err after its own manner, a chance that is invaluable if it soon succeeds in perceiving its error."³ He recognizes, of course, that science cannot proceed without hypotheses, but he regards them as a scaffolding which should be taken down when the building is completed, and which must not be mistaken for the building itself. Newton's "hypotheses non fingo" is repeated to ensure the mind's freedom of aspects: "All hypotheses hinder the ἀναθεωρισμός, the reconsideration of the phenomena in question, their examination from all sides."⁴

This examination from all sides is essential, because phenomena are inexhaustible, infinite; hence every mode of representation (*Vorstellungsart*)—and this includes theory, hypotheses, system—represents a limitation that is undesirable. It would, however, be a complete misunderstanding of Goethe to interpret him as wishing to dispense with all such modes of representation. On the contrary, he endorses Schiller's remark⁵ that "the natural sciences have hitherto erred in two directions: in confining nature within the limits of their theories, and in allowing objects to restrict the powers of thought." This is not the indecision of weakness, of inability to realize himself and to reach the essence of things, but of strength, of the deep insight, that no one perspective, nor one man, but only the total perspectives of all mankind can suffice for the apprehension of truth. His remarks to Reinhold: "In the course of time every possible opinion presents itself to us, partly as productive, partly as historical," and to

¹ *Op. cit.*, p. 357.

² *Op. cit.*, p. 358.

³ *Op. cit.*, p. 359.

⁴ *Works*, Weimar edition, Section II, Vol. 13, p. 441, referred to subsequently as W.A. II.

⁵ In a letter dated January 12, 1798.

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Jacobi: "I for my part, considering the many different tendencies of my being, cannot be satisfied with one single mode of thought," define the universality of Goethe lying midway between the architectonical-creative universality of the great "uomo universale" of the Renaissance and Hegel's constructive-historical universalism, which apprehends every shape of nature and history as a moment in the one metaphysical process. It is, in other words, a universality of observation, and examination of things from all sides. It is in this freshness of outlook, this diversity of aspects, and inexhaustible wealth of observations that Goethe's greatness lies. No metaphysic, no system arises in this way. Goethe would emphatically repudiate both—but just as little does it end in a mere chaos of aphorisms; rather are all his utterances, as phases of one concentric world, supported by a single constructive law.¹

Goethe's scepticism is directed against theory, against hypothesis and other modes of representation, against the proneness of weak minds to generalize rashly from a single observation. But its deeper significance first becomes apparent from his rejection of the quantitative method, for thereby it repudiates the standpoint of exact science in Europe since Pythagoras. In sharp opposition to the belief which, through the influence of Descartes, has become the ruling principle of modern thought, namely, that it is the task of science to substitute quantitative descriptions for qualitative ones, he puts the antithesis: "It is a false notion that a phrase or a mathematical formula can ever take the place of, or set aside, a phenomenon."² "A phenomenon that cannot be measured still remains a phenomenon."³ This does not mean that the mathematical method is dispensed with. On the contrary, it is treated with the greatest respect; it is even extolled as the model of scientific method.⁴ What is denied is simply its claim to be the *sole* instrument of scientific knowledge. The real motive of Goethe's opposition to it is his desire to preserve the phenomenal datum in its living, unanalysed concreteness, in its quality. The fundamental difference between Goethe's science and mathematical science is that it is qualitative, not quantitative science, that it leaves the qualities in themselves intact, that it does not reduce them to quantities. And should his science prove false in most of its assertions, it would still have its methodological significance in this regard. It is the presupposition of the mathematical view of the world that all possibilities of order must be merely of a formal nature. As against this Goethe's view rests on the implicit assumption that there are, besides the mathematical

¹ How near Goethe actually comes to Hegel's historical conception may be gathered from an interesting remark to Schiller, in a letter of January 24, 1798 (*Recl.*, Vol. II, p. 242).

² W.A. II, Vol. II, p. 98.

³ Letter to Schiller, referred to above.

⁴ W.A. II, Vol. II, p. 78.

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and logical orders, others grounded in the nature of the contents. At any rate, the place of Goethe's science on the "globus intellectualis" is only to be fixed after having recognized the need of a basic science of content.

It follows as a necessary consequence of this rejection of quantitative physics that Goethe's investigation cannot be a causal one, but must refuse to regard the causal principle as the ruling principle of order among phenomena. Not that he ignored the concept, as Emil du Bois-Reymond accused him of doing; indeed, he regarded it as "the most innate, most essential of notions." But he saw, as Schiller expressed it, that "with regard to relation it is the everlasting aim of Rationalism to ask for the causality of phenomena and to connect everything as cause and effect, a most commendable and necessary undertaking for science, but one that also may become pernicious through one-sidedness. I am referring here to your essay criticizing above all this abuse of the search for the causal determination of phenomena. Rationalism seems to fail here chiefly through the scantiness of its survey, which embraces only the length, not the breadth of nature."¹ It was Goethe's desire to survey nature in its breadth as well as in its length, and not to destroy the indivisible phenomenon by a false abstraction of the understanding, which treats as separate factors a cause and effect that actually constitute a single process. "Man in thinking errs particularly when inquiring after cause and effect; the two together constitute the indissoluble phenomenon. He who recognizes this is on the right path to effective action." "It is rightly said that the phenomenon is a consequence without a ground, an effect without a cause. It is hard for men to find causes and effects because they are so simple that they elude their view."² He associates himself here with the Greeks, who never spoke of causes or effects in their descriptions or reports, but simply presented the phenomenon itself.³ If the predominance of the concepts of cause and function in modern European thought has resulted in the loss not merely of the *notion* of substance but of the substantiality of man himself, this is clearly an attempt to restore to man his heritage of substantial being. Hence the question here asked is not what are the causes, but *what are the conditions under which the phenomena appear*. Their sequences and antecedents, their recurrence in innumerable different circumstances, their sameness and their diversity, are observed and admitted, their determinations are recognized and determined again by the human mind.⁴

¹ Letter, dated January 19, 1798.

² St., Vol. IV, Part 2, p. 372.

³ W.A. II, Vol. II, p. 370.

⁴ Cf. *Erfahrung und Wissenschaft*. See Heynacher: *Goethe's Philosophie aus seinen Werken*, p. 159.

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This negative attitude, the refusal to begin with theory or hypothesis, term, concept, or mode of representation (*Vorstellungsart*), with number, mechanical motion, or causality, determines at the same time the positive direction of Goethe's inquiry.

(1) *His method is phenomenological, firstly, in starting with the phenomenon itself, i.e. with the empirical phenomenon as it is given in sense-perception*, when, for example, we observe under certain determinate conditions the colours that appear on a white screen when the light is refracted through a prism. These empirical phenomena are in the first instance naïvely accepted, or are at least not subjected to critical reflection. The standpoint is thus definitely empirical, though it is better not to prejudge it by labelling it *Empiricism*, as Schiller did. It is not hellenic, nor mediaeval, but specifically modern. Goethe agrees with the Positivists in his demand that men shall confine themselves to the knowable and begin with as exact a description of the phenomena as possible, as he does also in his concept of truth, but he parts company with them in his desire to maintain the phenomena as they are, and not to resolve them into quantities or analyse them into their simplest elements ("simple ideas"), and notably in his refusal to give the central place to the concept of relation. In starting with the phenomenally given, he is associating himself with Kant, though also differing from him. Both insist that knowledge begins with experience, yet does not arise out of experience.¹ And it is evident that Goethe has in mind Kant's doctrine of the independent activity of mind over and above the given matter of sense, when he emphasizes the creative independent force of mental powers by which experience is ordered and formed. Yet the two differ essentially in detail. Kant begins with the chaos of sensations, out of which the mind constructs a world by its immanent principles of order. For Goethe, on the other hand, experience is no brute fact, but has already from the first an immanent order. The subject is not opposed to its object, for it is not yet distinguished from it. Goethe lives in the perceptually given, at a level at which the two are not yet separated. The process of knowing consists for him in a progressive clarification of this material, in which "every seeing (*Ansehen*) becomes an observing (*Betrachten*), every observing becomes a meditating (*Sinnen*), every meditating becomes a connecting (*Verknüpfen*), so that we may actually be said to theorize whenever we look at the world attentively."²

The complex and difficult question "Goethe and Kant" cannot be solved in an incidental manner. But it is important to recognize that, despite their similar points of departure, the two move on entirely

¹ W.A. II, Vol. II, p. 49.

² *Vorwort zur Farbenlehre*, W.A. II, Vol. I, p. xii.

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different planes, have different aims, directions, and interests. The fact that after a notable alternation of approaches and recoils, Goethe finally rejects Kantianism, because it is not able to reach the object, indicates the real difference in their points of view. Goethe lives in devotion to objects; he seizes them, they possess him. What he says of Rahel, that she did not judge of objects, but seized hold of them, is more profoundly true of himself. To begin with the phenomenon means, for him, to begin at a level at which subject and object are one.

Goethe holds that men have so far neglected the nearest thing. This nearest factor he supposes to be the appearance of which we are ourselves aware at any moment, and of which we might demand that it should explain itself if we penetrated deeply into it. Colour, for example, has been overlooked as an elementary natural phenomenon. "Do not look for something behind the phenomena; they themselves are the doctrine." "The highest point of view would be to recognize that all fact is already theory. The blue of the heavens makes known to us the law of chromatics."¹ An attitude of deepest modesty is expressed in the words: "To be equal to objects in their whole breadth means learning; to penetrate their depth means discovering."² Never have phenomena been considered more seriously nor been perceived in greater abundance.

(2) *Goethe's method is phenomenological, secondly, in proceeding through phenomena.* This procedure follows a definite rule. Even its starting-point is not indifferent, for not every phenomenon affords a suitable beginning. "Phenomena are of no value unless they yield us a deeper or fuller insight into nature, or unless we can apply them to some use."³ Their value lies in their fruitfulness, either for knowledge or for action. Here, however, the question arises: What makes the phenomenon reliable? To this Goethe replies: "One phenomenon, one experiment, proves nothing; it is but a link in a longer chain, that has significance only in a whole. . . . No phenomenon is self-explanatory; only a larger number, viewed as a whole, methodically ordered, yield at least something that could rank as a theory."⁴ By the production of an ordered sequence of phenomena what is subjective is eliminated, and what is objective is reached. *Goethe's phenomenological method is unique in this sense, that it is at the same time an experimental method, experiment being the link between subject and object, between concept and nature, between concept and Idea, and that it goes beyond the empirical phenomenon to the scientific.* Experiment is here understood as the deliberate repetition of experiences that we ourselves, or others before us, have had, "the restoring of phenomena that have occurred, either by chance or by design."⁵

¹ St., Vol. IV, Part 2, p. 376.

² W.A. II, Vol. 13, p. 444.

³ *Op. cit.*, p. 368.

⁴ *Op. cit.*, p. 375.

⁵ Heynacher, p. 135.

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Experiment has thus to assume the function of guaranteeing the phenomena. The isolated information furnished by a single phenomenon is rendered certain by repetition.¹ Its function is not the verification of an hypothesis, but simply clarification, the bringing of data into evidence. It is the increasing (*Steigerung*) of observation, and, by overcoming the isolation of the single observation, it accomplishes the transition to a higher level of experience. Since all things in nature stand in a constant relation of reciprocal causation, every phenomenon being connected with innumerable others, the phenomena most closely related to it must be produced, in order to exhibit *one experience* in all its possible aspects. The same experiment must therefore be performed under as many varying conditions as possible. In accordance with Leibniz's famous principle of continuity, each phenomenon is linked to its nearest, and experiences of the first and second levels are thus ordered in series. The experiences of higher levels which result consist of several others. "They represent the formulae for innumerable single calculations."² Thus the opposite dangers of exaggerating the significance of a chance combination of elements, and of overlooking an essential connection are avoided. "That order is the best in which the single phenomena become, as it were, one large phenomenon, whose parts stand in reciprocal relation."³ Spinoza's substantial monism (*Monosubstantialität*), itself a phase in the decline of monotheism, is transformed into a mono-phenomenalism, which demands that the multiplicity of phenomena be regarded so far as possible as *one* phenomenon.

This unification, being a concrete one, involves the difficult condition of exhaustiveness. "I became convinced from investigations in physics that it is the observer's first duty to discover every condition under which a phenomenon may occur, and to aim at the completeness of the phenomena, since they actually form a series, or rather are forced to interpenetrate, so that they will present themselves to his observation as an organization manifesting an inner life of its own."⁴ The conditions under which the phenomena appear are thus varied, in order that the entire range of their appearances may be discovered. Since nature is one, the phenomena through which it presents itself to us must have an inner connection. An internal organization must become apparent among them, which therefore we do not introduce (it is not the understanding that gives laws to nature, as Kant asserts), but which we discover in it. "To exhibit the total range of the appearances is the only way of getting beyond partial explanations, of banishing them."⁵ The elimination of partial explanations is not, however, the aim; it is merely a means

¹ *Op. cit.*, p. 136.

² W.A. II, Vol. II, pp. 43 and 28.

³ *Op. cit.*

⁴ *Op. cit.*, pp. 48, 49.

⁵ W.A. II, Vol. 3, Part 2, p. 9

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to obtain the knowledge of what is constant. "The constancy of the phenomena is the one important thing; what we think about them is quite irrelevant."¹

This transition to the higher phenomenon through a complete survey of the appearances, revealing their constancy, is at the same time the advance to law. The tentative character of this advance will be apparent from the following fragment:

"Phenomenon	}	.	.	.	.	test empirical
experience		.	.	.	.	test theoretical
law		.	.	.	.	test transcendental
cause		.	.	.	.

The way they succeed each other is the right one."² Thus the empirical test is the medium of transition from phenomenon to law, or from observation to conception.

Goethe's experiment derives its peculiar character, not from its method alone, but also from its connection with the human body. He believes that man, when he has the normal use of his senses, is the finest and most exact of physical instruments, and that the modern physicist has done a real injury to science in divorcing experiment from man, and attempting to explore nature only by artificial means. Here, however, a difficulty arises which we meet again at the last stage of the inquiry, viz., that the way lies through phenomena to a phenomenon of a higher order, but that this latter must be expressed in brief, easily comprehensible statements, comparable to those of mathematics.

(3) *Goethe's method is phenomenological, thirdly, in ending with the phenomenon.* Here, too, it stands in the closest relation to modern thought. Its goal is pure experience. "Who can claim to have an inclination for pure experience? All men believe themselves to be doing what Bacon so strenuously urged, but who of them has succeeded?"³ To reach the pure phenomenon is not easy, for it is not given, but is concealed by the various accidents of mental temper, organic conditions, atmosphere, light, temperature, etc.

To recapitulate, then, we have distinguished the following levels in the phenomenal: (1) The empirical phenomenon, which we all perceive in nature, and which is converted into (2) the scientific phenomenon, by means of experiments in which it is presented under circumstances and conditions different from those under which it

¹ W.A. II, Vol. 13, p. 444.

² *Op. cit.*, p. 454.

³ W.A. II, Vol. 13, p. 442.

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was first observed, and in a more or less happy sequence. (3) The pure phenomenon is the final result of all experiences and experiments. This can never be isolated, but is revealed in a constant sequence of appearances. To present it the human mind gives definiteness to the empirically fluctuating, excludes the accidental, rejects the impure, unravels the confused, even discovers the unknown."¹ This is merely a clearer analysis of what we have already shown. The pure phenomenon is the purified, clarified, constant phenomenon that is apprehended by pure intuition.² Like the Hegelian Absolute, it lies at the end of the inquiry, not at the beginning. It is the final result of experience and of experiment. It lies beyond the external, empirical data, for it is that which appears in them, that which is revealed in a continuous series of appearances. It is the form that persists through the alternation of the species, constantly recurring, yet presenting a thousand variations. The relationship to Hegel is closer here than is apparent at first sight; for Goethe's pure phenomenon is also Idea. For him concept is a summary, but Idea is the product of experience. For both a mental process is comprehended in the Idea, for the one a perceptual, observational one, for the other a process that is at once historical and reflective. But the fundamental difference remains that for Hegel the movement (*Gang*) of reflection is the movement of the thing-in-itself. "Quantitatively," Schiller points out, "the pure phenomenon must include the totality of the instances, for it is what is constant in all of them." Qualitatively, we might add, it is the Idea.

Only at this stage is it possible to understand what is meant by the "*Urphänomen*." It is the pure phenomenon; yet not every pure phenomenon may assume this title, but only the purest. It is also referred to as the "basic phenomenon" (*Grundphänomen*), the "basic experience" (*Grunderfahrung*), or the "original experiment" (*Urversuch*). Its primary function is unification. An innumerable multitude of phenomena is embraced within its unity, and becomes apprehensible through this synthesis. "*Urphänomene*" are basic phenomena, "in which the manifold can be contemplated."³

Thus in being one and undivided they are simple. "We must learn to see that what we have seen and recognized in the most simple must also be supposed and believed in the complex. For the simple conceals itself in the manifold."⁴ But the simple is not, as with Descartes, the result of analysis; it is what is apprehended in the simple glance of a purified perception. If experiment and the synthesis of a series of experiments in one fundamental experience are

¹ W.A. II, Vol. II, p. 40.

² In this respect Goethe's theory is a theory of pure intuition, not of pure reason (like Kant's), or of pure knowledge (like Hermann Cohen's).

³ Letter to Chr. v. Buddel. ⁴ Letter to S. Boissierée, February 25, 1832.

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the means of guaranteeing experience itself, its warrant is not the *cogito* of Cartesian or Kantian rationalism, it is intuition (*Anschauung*)—additional evidence of the far-reaching divergence between Goethe and Kant. Their bases are entirely different. Kant could never have said: "It is blasphemy to talk of an optical illusion."¹ "The senses do not deceive; it is judgment that deceives."² "Man is adequately equipped for all his genuine earthly needs if he will trust his senses, and develop them in such a way that they continue to prove worthy of his confidence." The basis of knowledge is thus trust in the senses, not, however, in experience as such, but only in the experience that survives the process of purification. The most certain is "that which recurs in the appearances again and again in uniform connection, thus indicating a constant rule."³ *

Albeit the *Urphänomene* are said to fulfil these functions of unification, simplification, and validation *by virtue of being phenomena*, it will be clear that they thereby transcend the sphere of the merely phenomenal. The transition from the phenomenon to the *Urphänomen* has thus the following implications: (1) That "experience is only half of experience," *i.e.* that he who desires to attain to knowledge cannot rest in one phenomenon.

(2) That such a transition must take place first of all *within the phenomenon itself*; it must reveal the connecting principles that are concealed within it, and require to be exhibited.

(3) That the free activity of mind is required to effect this transition, for nature does not reveal itself to an unintelligent stare, but only to a mind that is able to break through its surface appearance and penetrate to its depths.

(4) This transition can be effected because every phenomenon is more than a phenomenon.

An appearance is always an appearance of something. It is particularly necessary to be reminded of this to-day, when Positivism has divorced the appearance from its ground and has substantialized it. "Something appears" means that *something* comes upon the scene. This *something* is contained in what appears, but it is not exhausted by it. A man appears. The human entity that appears in this man, *qua* infinite, cannot be completely presented in any single appearance. Moreover, even such an appearance implies more than this one man, for it also represents a species of men, *e.g.* the miser. "Every existing thing is an analogue of all that exists."

But what is it that appears in the appearances? In the first place, not things-in-themselves appear in them, for Goethe recognizes no independently subsisting things-in-themselves. Riemeier has preserved an interesting communication,⁴ pointing out that man can

¹ W.A. II, Vol. 5, Part 2, p. 21.

² St., Vol. IV, Part 2, p. 349.

³ W.A. II, Vol. 12, p. 106.

⁴ Dated August 2, 1807.

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never express the whole nature of anything. "To know nature he ought to be nature itself. What he is able to express of nature is always something specific, *i.e.* it is something real, something actual, namely, something in relation to himself. But what he expresses is not all that it is; it is not its whole nature. This may serve as an explanation, and concession for those who still speak of things-in-themselves. Although they can say nothing of things-in-themselves just because they *are* things-in-themselves, *i.e.* are out of relation to us and we to them, and because we recognize everything that we say to be our own mode of representation . . . it is evident that they at least agree with us that what man can predicate of things does not exhaust their nature, that they are not simply and solely what they are thus said to be, but much more, and much else. . . . In other words, things are infinite in their natures. Man in expressing the object is below and above it, man and God, reconciled in one nature. We should not speak of things-in-themselves, but rather of the One-in-Itself. For 'things' exist only from the human point of view, which posits a diversity and a multiplicity. All is actually only one, but who is able to speak of this One as It is in Itself?" Appearances are not appearances of things-in-themselves, because there are no such things: things are merely the fragments into which our human weakness breaks up reality, wrongly representing the infinite in this finite form.

The One-in-Itself is the centre of this world view. *Urphänomene* differ from ordinary phenomena in manifesting the One in a specific manner. In them the creative and synthesizing forces of the universe become apparent in an unusual way. This Theory of Ur-phenomena is so difficult, because the term covers many—at least seven—different meanings:

(1) The Ur-phenomenon is an appearance, for it appears, as an image, if not to the outer at least to the "inner eye."

(2) The Ur-phenomenon is the thing that appears (*das Erscheinende*), in so far as it does appear. If we take it, not in isolation, but in relation to the class of phenomena with which it is associated, it *appears* in these.

(3) The Ur-phenomenon is the thing that appears, in so far as it cannot appear, because it is infinite, and thus exceeds what can be included in a single appearance.

(4) The Ur-phenomenon is that which *becomes apparent*, *i.e.* it is that which is in transition to actual appearance, and thus connects the appearance with that which appears. The two factors just distinguished here coalesce. The term phenomenon thus receives a new meaning: it is that which appears (*das Erscheinende*), that which comes to appearance (*das in die Erscheinung Tretende*), which exhibits its nature, which reveals itself by itself (*das sich von sich*

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selbst her Zeigende). We might call this the Christological aspect of the phenomenon, for the Word made flesh has here become the Word made phenomenon. This becoming is both fact and symbol. "A symbol is the fact without being the fact, and yet the fact, an image, focussed in the mirror of the mind, yet identical with the object. How superior this is to allegory, which may, indeed, be ingenious, even witty, but is almost always rhetorical and conventional, and is always better the nearer it comes to being what we call a symbol."¹ "Everything can be understood only symbolically; there is always something more behind it."² "All our knowledge is symbolic. One thing is a symbol of another. The magnetic phenomenon is the symbol of the electrical; it is both, itself and a symbol of the other, just as colours are symbols, through their polarity, of the poles of electricity and of the magnet. So science has an artificial life, and is an extraordinary mixture of fact, symbol, and analogy."³ Thus, paradoxically, fact and symbol coincide, yet do not coincide. It is in this sense that the Ur-phenomenon is an appearance in which the One-in-Itself appears, symbolically and actually.

(5) But there is also a subjective moment in the Ur-phenomenon, a specific attitude to reality. "What we call inventing or discovering in a higher sense is an important expression of an original feeling for truth, that has been developing for a long time in the depths, and issues as quick as lightning and unexpectedly in a fruitful discovery. It is a revelation, developing from within, that gives man a presentiment of his kinship with the Divine." This is precisely a definition of the Ur-phenomenon in its subjective aspect.

(6) Whilst the Ur-phenomenon embraces both the appearance and the thing that appears, it also includes the law of the appearance of that which was before invisible. Compare, e.g., the statement: "What comes to appearance must divide in order to appear."

(7) Finally, the Ur-phenomena are also the laws of the appearances themselves. "What we become acquainted with in experience are for the most part instances which, upon a little examination, can be brought under general empirical canons. These may, in their turn, be subsumed under scientific headings, which have again a higher reference, by which we get a further insight into certain indispensable conditions of a thing's appearing. After that everything adapts itself by and by to higher rules and laws, which, however, are not revealed to the understanding by words and hypotheses, but likewise to intuition by phenomena. We call these Ur-phenomena, because nothing in the realm of appearance lies above them, yet they are of such a nature that we can descend from them, step by

¹ *Philostrats Gemälde*, 1818. W.A. I, Vol. 49, p. 142.

² Letter to Chancellor von Müller, November 21, 1821.

³ Letter to Riemer, November 21, 1805.

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step, as we had previously ascended, until we reach the commonest data of every-day experience."

This plurality of meanings of the Ur-phenomenon makes its relation to the Idea very difficult to determine. That the two are not identical is evident from the fact that there are a number of Ur-phenomena but only one Idea. Why only one Idea? Because there are no things-in-themselves, but only the One-in-Itself. It is possible for Goethe to conceive the Idea as one, because he has the inestimable privilege to find the true, the beautiful, the good, and the Holy coincident, their domains being all subject to the same formal principle, their spheres concentric. The one Idea means nothing else than the unity of this formal principle. To ask what more it is is meaningless. There is no answer to this. If, however, everything, which we perceive, is a manifestation of the Idea, all perishable things are reduced to symbols. In this sphere of perishable beings the Ur-phenomena represent the eternal, revealing the inner relations of nature, of man, and of God. "The understanding cannot reach to this height; a man must be able to rise to the highest plane of reason in order to touch the Divine, which reveals Itself in Ur-phenomena, physical and moral, behind which it dwells, and which proceed from It."¹

But it is also true that, in another sense, the Ur-phenomenon is the Idea. It is the Idea immanent and active in the appearance, the creative central point, in which man, nature, and God are united. In it as a perceived order we become aware of the internal relationship of phenomena to each other, to the creative mind of man, and to God. With this Ur-phenomenon, as the ultimate object of knowledge, Goethe's inquiry after truth is satisfied.

We have seen that his method is genuinely phenomenological. It begins with phenomena, proceeds through them, and ends with them, returning at the last from the Ur-phenomena to the particulars whose claims have not at any point been abrogated. This method is a personal achievement in the double sense that it issues from Goethe's own personality,² and that it reacts upon it in a manner that it would need a separate inquiry to demonstrate.³

¹ To Eckermann, February 13, 1829.

² "Appearances are not independent of the observer; they are all interwoven and entangled in his individuality" (*Maximen und Reflexionen*, 1224, published by Hecker).

³ "To grasp the phenomena, to fix them to experiments, to arrange the experiences and know the possible modes of representation of them—the first as attentively, the second as accurately, the third as exhaustively as possible, and the last with sufficient many-sidedness—demands a moulding of a man's poor Ego, a transformation so great that I never should have believed it possible" (*Correspondence between Goethe and F. H. Jacobi*, 1846, p. 198).

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Although the present school of phenomenologists may have opened our eyes for the first time to Goethe's phenomenology, we must not overlook the fact that it differs fundamentally from Husserl's doctrine upon the following points:

(1) It is not, like Husserl's, a purely philosophical method, aiming at the discovery of ultimate truth, but operates at the level of science, or, more accurately, on a level between that of science and philosophy.

(2) It does not begin, therefore, with a "transcendental reduction," i.e. it does not annihilate the world, nor bracket it and its assumptions, nor does it desert the sphere of concrete consciousness in order to construct its system upon this plane. It is neither critical nor sceptical, but accepts phenomena naïvely, at their face value.

(3) Nor does it perform any "eidetic reduction," proceeding from that which is directly perceived to its essence. It does not ask what is the essence of colour, the essence of red, etc. It even denies that such questions have any meaning. (Goethe considers it nonsense to talk of the "essence of light.") Nevertheless it is true, as we have seen, that it reaches essences by its own route, but this route lies, or *should* from its natural tendency lie, in the realm of the phenomenal itself.

(4) Contrasted with Husserl's, this route is the route of the scientific investigator, who uncompromisingly rejects Husserl's transition from the particular to the universal, insisting upon experiment as the medium through which the subjective must attain objectivity.

(5) The law that is reached by this method is regarded, at least in its earlier stages, as hypothetical; it is not, as with Husserl, an absolute norm to which all subsequent experience must conform.

(6) As against this, the principles finally attained are regarded as having metaphysical validity, since in them the Godhead is revealed, whereas Husserl claims no ontological significance for his principles.

(7) Husserl's principles are formal; Goethe's have reference to content, and can never be completely resolved into relations of pure form.

Apart from these important differences, and from the fact that Husserl's phenomenology is a search for absolute truths and for a *mathesis universalis* encompassing the entire realm of the possible, whereas Goethe's is an investigation of the phenomenally given world, in its multiplicity and its unity, the two methods exhibit a certain community of character. For it is the endeavour of both to preserve the qualitative aspect of things from dissolution into the quantitative, and to discover its specific character.

To make clear the relation of Goethe's phenomenology to the Hegelian, and its divergence also from this, would demand an

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analysis of his phenomenology of nature which must be reserved for a later inquiry.

Goethe's method has clearly certain material defects that we have no wish to conceal. It does not reach the level of precise concepts. Yet all knowledge is a knowledge of concepts. If it is his view that the system of laws underlying appearances can be immediately perceived, this is interesting as implying the denial of an abstract order of thought and hinting at a structural (*gestalt*haft) order. If, however, this leads him to regard ontological connexions as objects of direct intuition or of "intuitive judgment" (*anschauliche Urteils-kraft*), whereas they are actually objects of understanding, which follows only the path of perception, he is unwarrantably restricting their range. It is never possible to decide from intuition whether an ontological connexion exists or not; and what he designates an *Ur-phenomenon* on the ground of direct perception is often extremely arbitrary. Thus the fascinating concept of the *Ur-phenomenon*, with the diverse meanings that we have enumerated, actually does more to conceal the real problems at issue than to solve them. It involves the problem of a structural order immanent in the phenomena, which cannot be apprehended by the processes of the old logic, but which plays an important rôle in the domain of living things—a problem that has lately become crucial through the influence of Wertheimer's *Gestalttheorie*. It also raises the problem of an order of content, *i.e.* the question as to the existence of uniform connexions that are not of a formal nature, or orders of co-existence, concomitance, the conjunction of qualitative elements, constituting peculiar structure of their own. Lastly, there lurks behind it the question of the laws which everything that is to appear must obey. If all these questions are carefully distinguished, the apparently purely perceptual character of the *Ur-phenomenon* vanishes.

Nevertheless, I believe that Goethe's phenomenology—as an example of a pre-philosophical phenomenological analysis—may have some real value for the present situation, for an age whose watchword is "the return to the concrete," for the transition from Husserl's abstract phenomenology to the concrete phenomenology which will be needed to prepare the ground for the reformation of the philosophical problems. Heidegger tried to effect this transition, but has unjustifiably and arbitrarily restricted its domain, leading into a *cul de sac*, so that the endeavour ought to be made once more on a wider and firmer ground. In any case, our age would do well to adopt the attitude which leads to this method: "We have daily cause to clarify our experience and to purge our minds."

Note.—The author is much indebted to Miss Mary E. Clarke for her valuable help in preparing the article in English, and to Professor A. Wolf for assistance in the correction of proof.

THE BASIS OF SOCIETY

ARNOLD H. KAMIAT

A SERIOUS error that has crept into the thought expended on social problems must be treated here. It consists of a false and misleading equation of problems and their solutions. Put in other words, the error consists in a failure to conceive a problem in terms of the greater whole of which it is a part, and to perceive that an adequate solution of the problem is unattainable without a correlated treatment of the larger problem. In fine, the complete solution of a social problem involves the transfiguration of society and of its component parts. How does the error in question manifest itself?

When it is a question of the solution of an economic problem, a remedy, couched in economic terms, is suggested. If it is a political problem that it is desired to settle, solutions in terms of political transformation are broached. For the marital question, a sociological prescription is offered. If it is the question of international relations that is the object of attention, the suggested answer will make its appeal to international law, diplomacy, ethnology, and political science. Biological problems call forth a eugenic programme, problems of crime a criminological and penological prescription. For the solution of the problems connected with law and its execution, jurisprudence is appealed to. In fine, social problems are treated as independent wholes bearing no necessary relation to each other. The problems are simply collocated, and to each problem there is equated a solution, the latter generally couched in terms of the art or science within the province of which the related problem is held to lie. All of which is justifiable, but only when it is used in connection with another and more important method.

The error that has just been mentioned consists of the utter neglect of the latter. The method in question is the conception of the unity of all social problems and of the consequent necessity of their joint solution by means of a gradual and fundamental transfiguration of society and its integrant parts—individuals, societies, and institutions. Society is one. Its problems are one. No one of these problems can be adequately treated except in so far as the society and the general social disharmony of which the problem is a segment are attended to. The solution of the social problem is one.

A survey of social situations and their interconnections is suggestive. Take the problem of war. To abolish war, recourse is being

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had to the League of Nations, international courts, the Kellogg Pact, and limitation and disarmament conferences. But can war be abolished unless measures are taken toward the solution of the problem of population, the diminution or elimination of economic rivalry, the education of future generations in international-mindedness, the conquest of the autocratically conditioned dominance motive, the growth among humans of rational self-control, the submergence of their impulse toward cruelty, and their evolution from a competitive and feudal level of life to one more democratic?

Can the economic problem be solved by primarily economic means? Socialists, syndicalists, single taxers, anarchists, and communists think so. But what if it is found that the economic problem is correlated with every other, and requires for its adequate solution the synchronous treatment of political, marital, juridical, ethnological, biological, psychological, educational, endocrinological, and other problems? Can these co-ordinate problems be adequately dealt with by a socialist or single tax government, a syndicalist union of all the workers, or a soviet of workers and peasants? Or do all social problems constitute an integrated situation that only a synoptic vision, a comprehensive social science, and a genuine radicalism, as distinguished from the pseudo-radicalisms just mentioned, can hope to master?

The need for a sociological monism has long ago received recognition. And in response thereto false monisms have reared their heads. Foremost among these is that which derives all problems from the economic one. The solution of all social problems is contingent upon the solution of the economic one. So runs the pseudo-monism of the socialist, syndicalist, anarchist, and communist movements. The splendour and the thoroughness with which "radicals" have thought things over is revealed by the contradiction between their theory and their practice. In practice, the solution of all problems, including the economic, is made contingent upon the solution of educational and political ones. Before the economic transformation that the "radical" contemplates can begin to take place, a deal of propaganda must be undertaken, a great number of converts must be made, a social movement must be made to get under way, a party or industrial union must be organized, a class war must be waged, and political power must be won. Perhaps it may also be necessary to establish a dictatorship, suppress all freedom of thought, disfranchise a good proportion of the electorate, and roll back a few counter-revolutionary movements. The anarchist revolution will require, among other things, the destruction of the state and the organization of voluntary associations of all sorts. It is obvious then that the economic transformation of society, as

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"radicals" conceive it, is not by any means a first step. It is a stage in a process, the beginnings of which involve operations of a non-economic nature. De Man has pointed out that the effectual organization of a labour union requires the preliminary moral transformation of the worker. He remarks that ethical, and not merely economic motives, lie at the basis of trade unionism. Decades ago Ely noted the self-sacrifice of myriads of socialists who gave of their own to the movement without any thought of any economic advantages accruing to them. Their thought was solely the welfare of future generations. Kropotkin conceived the social problem as basically economic, and it was to an economic mutation of society that he looked for its solution. But his scheme of voluntary economic associations presupposed an extant moral exaltation pervasive among the masses.

All the economic schemes of the socialists, the syndicalists, the communists, and the anarchists presuppose, by implication, the attainment, present or imminent, of a certain moral development. Mazzini's thought was clearer than that of the economic "revolutionists." He definitely formulated the need for an ethical transmutation, and he deemed it of sufficient importance to warrant its becoming a consciously entertained goal.

Then there is the biological monism. Social woes are referred to the operation of dysgenic factors. Social problems owe their being to the presence in society of men and women of congenitally deficient physical, mental, and moral capacities. There are too many plebeians, too few patricians, too many proletarians, not enough aristocrats. The most fundamental and the most necessary socially reconstructive measure is the adoption of a eugenic programme.

Such a programme is undoubtedly needful. But it is a programme that can be adopted only to the extent that other and non-biological reconstructions and reforms are effected. The solution of the biological problem must parallel and be paralleled by the conquest of other and non-biological problems. The eugenic programme requires for its successful consummation electorates and legislative bodies more intelligent and more scientifically minded than those now extant; it requires a wider dissemination of preventive knowledge, and this in turn requires the conquest of prudery and the modification of the laws that govern obscenity, so-called; further, in order that there come into being a more intelligent electorate, the economic problem must be solved to an extent permissive of such higher standards of life and such an augmentation of leisure as will make possible a wider diffusion of culture than now exists. And further, the success of a eugenic programme will require the abandonment of the traditional valuation of population-quantity over population-quality. In fine, the solution of the biological

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problem requires the parallel conquest of certain non-biological ones.

How shall a genuine sociological monism be arrived at? Perhaps this question is more easily answered after a close examination of the fallacy of the false monisms of the sort that have just been treated.

The fallacy lies in this, that it is sought to explain a multiplicity of objects in terms of one class of them. Or to put it differently, it is sought to explain several categories of social phenomena in terms of one of these categories. This represents an attempt to interpret a whole in terms of a part, conceived not as a part, but a cause of the whole!

Still another error lurks in the process. This error consists of the confusion of causality with coeval correlations. The segmental monist simply mistakes a correlation of two or more social processes for a causal relationship. It is assumed that if all non-economic social phenomena can be shown to be correlated with economic processes, then the economic causality of social changes is demonstrated. Or if all non-biological processes can be revealed as correlated with biological phenomena, then the primacy of the biological is established.

The error of segmental monism is really an error in metaphysical thought. Although the self-styled practical person—and almost everyone who is not by profession an artist, or scientist, or philosopher styles himself practical—affects a disdain for metaphysics, he nevertheless delves into metaphysical speculations and employs metaphysical presuppositions. He does this unwittingly, of course, but he does it.

The metaphysical error to which attention is being drawn here has to do with the conception of society as of something that rests upon something else as a basis. Speculation then endeavours to ascertain what these bases might be. There is no need to dwell on them here. Everyone is familiar with them. Everyone has repeatedly received the assurance that the basis of society is the industrial order, the political system, the human germ-plasm, the family, the mores, the church, the ideologies, the division into nations, the gregarious impulse, or the legal structure. Every single one of these claims is misleading.

What is meant by the term "basis"? From a relative standpoint, anything that functions as ground. But this is not the sense in which the sociological monists employ the term. From a relative standpoint, everything may serve as a basis with reference to something. But the sociological monist who assumes that the transformation of a given aspect, and of that given aspect only, of the social order

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involves a radical transfiguration of that order, is unquestionably employing the term "basis" in an ultimate sense. Before entering upon the exposition of the metaphysical falsehood peddled by the sociological pseudo-monist, care should be taken to distinguish him from the genuine sociological monist, who correctly asserts that the modification of *any* important aspect of the social order involves the metamorphosis of that order. Why the one speaks truly and the other misleads will soon become apparent.

What can the word "basis" mean in the ultimate sense? Only one thing: that which is a ground, but has itself no ground. It is that on which everything rests, while it rests on nothing. Everything is dependent upon it; it is dependent upon nothing. Such is the basic defined in the ultimate sense. It is now in order to assert that a sociological monism that converts any aspect of the social order into an ultimate basis of society is misleading, and, further, that society cannot properly be spoken of as possessed of any basis other than that constituted by the very essence of society itself. That is to say, society has no basis other than that which is numerically identical with the essence of society itself. The essence of society, that which makes society society, is its basis.

Enough has already been said to dispose of the economic and biological monisms. Neither the economic nor the biological can be classified as basic, for neither can be said to be independent and to rest on nothing beyond itself. Each is dependent for sustenance on a great many other aspects of the social order. It has been seen that the practices of the radicals refute their theory of the basic economic. And a similar thing may be asserted of the eugenicists, the believers in the basic biological. They are compelled to rely on all the aforementioned non-biological factors for the institution of their eugenic programmes. Sir Francis Galton is even reported to have said that the adequate execution of the eugenic programme would require the distribution among men and women of a kind of religious zeal for biological improvement. But a religious zeal for anything is not a biological phenomenon, at least not in the sense contemplated by the eugenicist.

That which has been said concerning the economic and the biological can be asserted with reference to the political, the juridical, the cultural, the moral, the religious, and any other segment of the social order that may be classed as basic.

The word "basis" should be used with full regard for its meaning, or it should not be used at all. Those who cannot accept its meaning, its implication, should drop the use of it. It is a metaphysical concept—and the problem of the basis of society is a metaphysical problem. This will scare those whose delicate mental constitution unfits them for a metaphysical fare, and those who may be described as meta-

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physic-phobes, persons who are rather squeamish about metaphysics and shy away from every manifestation of it, their peace of mind being dependent on their failure to detect the metaphysic latent in every one of their own views on things. These people must either overcome their squeamishness or keep quiet about almost all the questions that matter, that concerning the basis of society included.

The definition of the basis of society is to be arrived at by two stages. The first stage requires that society be envisaged as a whole, a unit, an integral. Such a step enables one to transcend segmental viewpoints, and all the nonsense connected therewith. Practically all the discussion concerning the basis of society is vitiated by the segmental method employed. An aspect of society is abstracted from it, placed under society, and termed a basis. This process serves to blind one to the fact that the basis, so-called, being but an aspect and not the foundation of society, and therefore dependent for its proper function on all the other aspects, is not a basis within the proper meaning of the term. But surmount the segmental viewpoints, and a view of society as an integrated order, an organized essence appears. Herein lies the basis of society: in its unity, its wholeness, its self-consistency. Society is an entity, containing parts, bearing certain relations to one another. Every part and every relation has its setting within this whole—it rests therein, has its roots therein. It has its widest social meanings determined by and within the whole.

The second stage in the process requires another ascent. This time society and its unity must themselves be surmounted. (What comes now they whose attitude toward the metaphysical partakes of so much squeamishness will find quite unpalatable.) The integrity of society must be perceived in its wider context. It must be perceived as the expression of a bond that is more fundamental, nay, most fundamental—the expression of that which is really and truly basis—itsself without ground, yet the ground of all else. To such a step all that has just been said concerning the basis of society logically commits us. If integrity is basis, and the wider integration is fundamental with reference to included and lesser integrations, then the social order must itself rest on a larger order, and ultimately on the largest order conceivable. This is equivalent to the statement that it rests finally on the ultimate principle of order, whatsoever it might be. And it is there that the most ultimate basis of society is to be found. Further, it is in terms of this ultimate integrative principle that all problems of social construction and reconstruction are to be approached. This means an end to the business of wrenching something out of the social context, placing it beneath the social structure, and terming it a basis. It means an end to the destruc-

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tively harmful fallacy that social progress must halt at all points but one, misconceived as fundamental, and mark time while progress at that point is completed. It means a conception of progress as distributed, simultaneous, carried on with a due regard for the balance and the rhythm and the order of the whole.

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PHILOSOPHY IN FRANCE

M. LE ROY'S INTERPRETATION OF EVOLUTION

No trait is more characteristic of contemporary philosophy in France than its continued fecundation by the physical and biological sciences. The divorce between philosophy and science that existed in the first half of last century is now regarded, by almost common consent, as an error of the great pre-war Unenlightenment. The *ménage* is *rémonté*; the *vieilles traditions* of Descartes and Pascal live again, though very transfigured. How long the alliance may endure, how and how much it may benefit both parties, it would be idle to prophesy. But it is significant that Boutroux and Bergson were compelled to devote much energy to acquiring a scientific competence, the one in mechanics, the other in biology. It is still more significant that a number of professional scientists (such as Milhaud, Duhem, Hannequin, Paul Tannery, Poincaré, and Meyerson) should, with the passing of years, have contributed less to their sciences and increasingly to philosophy. This mutual invasion of territories has, indeed, become so considerable and enduring that philosophy in France is at present, for good or ill, almost wholly 'philosophy of the sciences.' It is now within this 'internationalized' neutral zone that the distinction between the epistemological and the ontological has to be drawn. Thus, Meyerson fairly represents the former emphasis, Bergson and Le Roy the latter. And if it is rare for one man to hold successively a chair in mathematics and a chair in philosophy, like Milhaud and Whitehead, rarer still is it for one man to hold both concurrently. But M. Edouard Le Roy has for many years lectured on mathematics and mechanics at the Faculté des Sciences in Paris; he has extended and modified Bergsonism from Bergson's former chair at the Collège de France.

In 1899,¹ M. Le Roy made clear his essential agreement with Bergson's interpretation and evaluation of scientific knowledge, and exposed what he still considers the radical falsity of mechanism. That natural occurrences are completely determinate and that natural facts are always specific is the suppressed premise common to the views of the man of science and the man of no science. The truth is just the contrary of this, M. Le Roy maintains. If it really is Nature we are speaking of, and not an intellectualized representation of Nature, then what is natural is never specific nor ever completely determinate. The conventional character which Poincaré assigned to only the most pervasive laws of science, M. Le Roy affirms of all without exception. "It is the scientist who makes the order and determinism he supposes himself to recognize in things." Hence, since the only laws that science finds acceptable are such as are quantitatively determinate and formulated in terms of fixed concepts, it follows for M. Le Roy that scientific laws describe natural occurrence as having a character which really it has not. Likewise, the common view of natural fact—presupposing a *morceilage*, a *découpage*, in the continuity of natural process—is a conception the scientist constructs by the aid of

¹ Cf. "Science et Philosophie," *Revue de Métaphysique et de Morale*, 1899.

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spatial imagery, and devoid of ontological justification. The very procedure of the sciences declares the relativism that unavoidably infects their results. It is a procedure of unverified and unjustified elaboration. What is initially called "data" is not that which is given, but something much more manageable that is conceptually created and substituted for what is given. Such artificially simplified "data" eventually become displaced by laws, and these remove us farther from the Nature we are supposed to understand through them than do the "data." Ultimately this intellectualist elaboration culminates in the notion of a rational science which, however 'economical' and useful, lacks the ontological justification essential for its acceptance as genuine knowledge. 'Rational science' is but "the outermost term" of intellectualist construction, "no more than a purely formal play on symbols (*jeu d'écriture*) without intrinsic significance." Nor may we speak in strictness of applications verifying our hypotheses: it is rather that the hypotheses are so constructed as to show the success of our applications. Like our calculations, they are not true in a strict sense of the word, though they are efficacious. Their success, however, is "less the issue of our knowledge than of our action." Scientific laws on this view are simply "recipes" enabling us to intervene successfully in nature and compel its forces to subserve our ends in practice and industry. "Scientific determinism is not strictly a reality we discover, but a decree we impose." Thus, far from denying freedom to our will, science itself postulates it.¹ And the conclusion that all discursive knowledge is vitiated by an inescapable relativism carries with it a restricted form of pragmatism. The primacy of action and the volitional freedom presupposed by science is manifested at three levels: in practical activity, discursive activity, and intuition. To the two last we shall return later.

It is from these preponderatingly negative results that M. Le Roy began a series of researches into biological and human evolution, and their outcome is represented in the five volumes² which present a constructive idealist philosophy. *The Idealist Exaction and the Fact of Evolution* forms the first link in the chain. And by "Idealism" he understands two connected philosophical tendencies, the one reducing all existence to thought, the other subordinating all existence to whatever dominates and governs thought. "Thought," however, must be understood not as exclusively judgment and ratiocination, but with the wider Cartesian connotation of any species of mental operation. And to this is assigned, by way of comprehension, the Bergsonian character of an activity possessing no "immutable nature" but continuously exploratory and at times creative and inventive.

Now when we consider the character of the findings in palaeontology and evolutionary biology, it would seem at first blush as though the twofold exaction of idealism just cannot be met. For these scientific results are regularly represented as presupposing the primordial existence of inanimate matter. Consciousness has accordingly to be introduced as a sort of later addition *plaquée* on matter, or as a residual by-product. "The history of the cosmic phenomenon appears as a real enigma, something paradoxical and almost scandalous in the idealist perspective, for it seems to force our acceptance of first origins that are wholly material." But, M. Le Roy is convinced, there is no genuine problem here to be faced. It is our assumption

¹ Cf. art. *Bib. du Congrès de Philosophie*, 1900.

² EDOUARD LE ROY: *Les Origines Humaines de l'Évolution et l'Évolution de l'Intelligence* (pp. 375; Fr. 20); *L'Exigence Idéaliste et le Fait de l'Évolution* (pp. 270; Fr. 15); *La Pensée intuitive, I. Au delà du Discours* (pp. 204; Fr. 15); *La Pensée intuitive, II. Invention et Vérification* (pp. 296; Fr. 20) —all published in the collection, "Bibliothèque de la Revue des Cours et Conférences" (Paris: Bovin); and *Le Problème de Dieu* (pp. 250, 1929, Paris: L'Artisan du Livre, Fr. 20).

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of the ultimacy and disparity of matter and mind that creates our "problem." What the findings of palaeontology and biology really indicate is no more than a bifurcation of the mental within the vital. So the genuine distinction lies between life and mind, not between matter and mind. All of which evidently amounts to saying that the demand idealism makes upon M. Le Roy is that he should exhibit biological evolution as freed from "the sterilities and contradictions of materialism" and as expressing no opposition to the primacy of consciousness and value.

His earlier critique of scientific naturalism had, of course, cleared the way for a non-mechanistic treatment of the appearance and persistence of life on earth. The philosophical interpretation of biological evolution divides at this point, involving two distinct projects, *viz.* (i) a re-interpretation of matter on the analogy of habit which is "pre-individual and trans-individual" (matter being defined in consequence as "a constellation of habits sunk into oblivion," or "dead habits"); and (ii) an examination of the inventive character present in creative activity. That life could emerge from matter is ruled out by the fact that change in matter proceeds from higher to lower 'potentials' (testified by the far more frequent occurrence of chemical destruction than chemical synthesis in inorganic nature¹). But vital change proceeds in the reverse direction, from lower to higher potentials. That human beings can make chemical compounds more complex than those offered by nature is indirect evidence. A mechanistic type of theory explains best lower manifestations of life, a vitalistic one the higher developments. But neither nor both can explain the occurrence of genuinely new forms of life. Evolutionary theories which assign the dominant rôle to adaptation are doubtless sufficient to explain those stoppages in life-process at which this or that distinctive form of life is first manifest. But they are not sufficient also to explain the organization which carries that process to higher and higher manifestations. On the other hand, M. Le Roy finds nothing in the various evolutionary theories he examines (chs. ii-iv) which excludes the possibility of a conciliation between a psychological interpretation of life and "the most radical ambitions of physical chemistry." Vitalism usefully stresses the "trans-mechanical" character of life, but the origination of new forms becomes intelligible only by a doctrine (M. Le Roy's "neo-vitalism") which, while leaving a free hand to physico-chemical principles, makes it possible to understand how organisms can build themselves up and repair themselves. Life makes its own demands and has its own distinctive and original tendencies.

What the direction and character of evolutionary process fully is, and why it should be just so, is not to be made intelligible by interrogation of its biological manifestations. It is to the more developed stage of creativity, expressed in human thought and industry, *i.e.*, to the work on *Human Origins and the Evolution of Intelligence*, that we must turn. What exists manifests new and higher levels of creativity. But creation and evolution are not incompatible nor mutually limitative. On the contrary, they are mutually explicative. In tracing back the evolution of natural phenomena, science can find no absolute beginning. Its procedure of "parcelling" leaves it always confronted with an inexhaustible residuum, never with a single, initial, instantaneous and completely accomplished event. Nor does evolution require such an event. It exacts only a continuous passage—a process which "traverses and fills the universal duration, manifested in all the variety of one immense continuity." There is no making of 'things' one by one to be accounted for, as common speech seems to suggest. The duration and creativity of evolution are alike exemplified by the recurrence of new forms and new types of behaviour. And it is in terms of these that M. Le Roy provisionally defines

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'invention' as being a generative passage "from an inferior to a superior level by means of an act issuing from the former." It remains therefore to elicit the various modes of inventive action displayed in the continuum of vital process. Although invention occurs at pre-human levels, it can be understood only by considering its manifestations at the human stage.

It is an arresting fact that man's rôle in the universe is altogether disproportionate to the morphologically slight difference of his body from that of non-human animals. His domination is unforeseeable and undeducible from an inferior level. Man's conquest of the earth, his subjugation of other species to serve his ends, his adaptation and habituation of the members of his own body to serve as his instruments, and—even more remarkable and impossible to non-human animals—his use of the members of his own body to invent instruments external to the members that use them (*sans s'y incarner*), so escaping domination by his own body in that he can act in ever new ways without having to modify his body to do so—all such inventive and purposive creation distinguishes the human group. But most profoundly is the "Noosphere" differentiated from the enveloping "Biosphere" by the emergence of self-awareness and reflective activity in man. In its occurrence and employment the inventive character of the "hominizing" process becomes most plain. Renouncing his arboreal life, man becomes a two-legged walker and a two-handed worker. He can use his hands for other ends than walking. He is intelligent because he possesses hands, he possesses hands because he is intelligent. "Hominization" advances with the purposive use of fire and the shaping of stones. His purposes are at once individual and social, and with the need for collaboration he invents its instruments—language and custom. And with the development of social existence and purposes, greater becomes the liberation and variation of conscious expression. For the same reason that M. Le Roy found the question, 'How can vital activity be explained as emergent from matter wholly non-vital?' was one that should not be put, so here there is no genuine problem of how the 'hominizing' and conscious character of human activity can be derived from non-conscious vital action. In the inventive process of nature there is no bifurcation of the sort suggested, therefore none to explain. The process is initially at once conscious and inventive, as it is at once evolutionary and durational. Its creativity is comprehensible only through its inventive (*i.e.*, spiritual) character, and this is seen to remain. M. Le Roy holds, so soon as we make the due mental correction of eliminating the static-mechanistic conception of inorganic matter from biology. "*La vie est conscience dès l'origine, conscience diffuse qui peu à peu se concentre, s'intensifie; et toute conscience enveloppe un germe de réflexion naissante: elle ressemble à une réflexion qui reste virtuelle, parce qu'elle s'oublie et se perd à mesure qu'elle s'éveille. On n'a donc point à expliquer un commencement absolu de la puissance réflexive: tout revient seulement à voir comment elle se dégage et se fixe.*"

The varieties of activities manifest in the successive stages of the 'hominizing' process reduce to two types, the technological and the purely reflective. The development throughout shows no steady and constant advance or uniformity, but discontinuity, oscillations, 'leaps', crises and periods of comparative stagnation. In this respect, intellectual evolution conforms to the pattern of vital evolution, for evolutionary process is all of a piece. There is no 'rhythm of progress' to be discovered, for the good reason that this would imply the operation of some form of necessity and so rob creativity of its essential spontaneity and novelty. And we to-day, M. Le Roy suggests in his penultimate chapter, are passing through one of those "crises" or mutations in the process of hominization. "*C'est le drame de la moralité qui commence,*" to

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be traced to (i) a technical advance that has been too intense and rapid ("le tourbillon des gestes ne laisse plus le temps ou la force de la réflexion morale"); (ii) the old social framework being broken and not replaced; (iii) the loss of our old cosmological framework, and our consequent uneasiness concerning the worth of spiritual beliefs and their admissibility within a 'system of nature' that has grown so immoderately. In these diverse social disturbances we are witnessing the "premiers tressaillements annonciateurs d'une suprême phase de genèse vitale: la réalisation de l'*homo spiritualis*."

Such is but the barest skeleton of M. Le Roy's philosophy. A suggestive indication of the vast mass of scientific material he adduces and dissects so expertly is impossible within the limits of my space. Nor, indeed, is even the outline fully drawn; but I hope to complete it with an account of M. Le Roy's most recent works—*Intuitive Thought* and *The Problem of God*—in the July number of this Journal.

S. V. KEELING.

PHILOSOPHY IN GERMANY

IN the *Critique of So-called Practical Knowledge*¹ ALF ROSS wishes to show that ethical judgments are nonsensical. He begins by asserting that when people speak about practical knowledge they mean knowledge which contains an unconditional command to the will, and this, he points out, involves a confusion between knowledge and volition. Thus, since all ethical theories are forms of practical knowledge, they are doomed to failure. All ethical theories can be classified into two types: they all belong to the ethics of value or the ethics of duty. These differ very radically, since the one takes value and the other duty as its fundamental concept; but they are inadequate for the same reasons. Both value and duty are self-contradictory concepts, and both awareness of value and awareness of duty are quite different from what ethical theories suppose.

Ross supports these charges with a great deal of detailed discussion, and in a brief account one can only indicate his arguments very roughly. Thus, for example, he supports his first charge by concluding that value is an unanalysable quality and yet also contains a relation to the will. On the one hand, all naturalistic analyses are inadequate, and yet, on the other hand, if value is an unanalysable quality, our knowledge of it can only be theoretic, and so will not be practical knowledge. He supports his other charge by analysing awareness of value and awareness of duty in great detail. All disinterested behaviour, he believes, is dependent on impulses excited by suggestion. As behaviour series frequently recur we associate our impulses with certain objects, and when we experience the impulse we think of the object. Ethical theories mistakenly suppose that impulses (pleasures and desires) refer to objects in some other way.

Ross concludes that ethics should be replaced by ethology. Moral judgments are nonsensical, but moral phenomena are real. They are conative experiences dependent on suggestion and leading to behaviour. Ethology is the psychophysical study of this behaviour.

The major part of the book consists of a detailed examination of different ethical theories. And though the author's main aim is to prove that they suffer from the defects indicated, he is very willing to acknowledge that they often exhibit a great deal of insight.

¹ *Kritik der sogenannten praktischen Erkenntnis*, Felix Meiner, Leipzig, 1933. Pp. 450.

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In *Our Dissatisfaction with Civilization*¹ SIGMUND FREUD maintains that the main reason why civilization dissatisfies is because it thwarts the aggressive instinct. This view, he remarks, may appear to indicate a fundamental change in psycho-analytic theory, but in fact is a development of long-accepted views.

It is obvious, he says, that many people are dissatisfied with civilization, and some believe that we would be happier if we returned to more primitive conditions. What can we say to this view? It is futile to attempt a comparison between the happiness of one epoch and another. The better method is to discover the extent to which civilization satisfies and thwarts our instincts. We can assume that its origin and development are due to its satisfying fundamental desires. It has enabled men to satisfy their material wants. It has guaranteed a permanent object of love for man and woman, for man in his wife and for woman in her child. However, it is obvious that it also thwarts the sexual instinct, but it compensates to some extent by the sublimations of this instinct which make scientific and artistic achievements possible. Its most formidable enemy is the aggressive instinct which perpetually conflicts with its attempts to bind men together into wider unities.

How, then, does civilization defend itself against man's natural aggressiveness? It has three methods of defence. We find that the members of one social group direct their aggressiveness on to the members of another group, so that, for example, neighbouring states are often hostile to one another. Secondly, civilization relies to a certain extent on love in its modified form of friendship. But this defence is very inadequate. The law, "Love thy neighbour as thyself," conflicts so sharply with the aggressive instinct that it can only be enforced at enormous expense. We pay for civilization by transforming our aggressiveness into the feeling of guilt.

Freud then discusses the origins of this feeling. Perhaps the two most important points are these: (1) That the super-ego and conscience, its function, originate through love and hate of the same object. The hate leads to hostility (in deed or thought) and the love to remorse and formation of the super-ego. (2) That thwarted aggressiveness is turned inwards and transformed into the super-ego, so that the super-ego increases in severity the more we thwart our aggressiveness. Thus civilization which perpetually thwarts aggressiveness increases the feeling of guilt to an enormous extent. And we must ask whether this burden is bearable or not. For just as the individual conscience sometimes makes unreasonable demands, so it is with the social conscience, namely, morality. The fate of civilization, so Freud concludes, depends on its ability to deal with aggressiveness.

The Problem of Genius,² by W. LANGE-EICHBAUM, gives a short and concise account of conclusions which the author has discussed at greater length in an earlier book.³ They are based on empirical investigation into the circumstances and character of people taken to be geniuses. It is obvious, as the author points out, that judgments concerning genius vary very much in the sense that a man is idolized at one time or place and reviled at another. It is also clear to the unbiased observer that some of the men acclaimed as geniuses have little ability of any kind. We shall understand this state of affairs if we realize that in judging someone to be a genius we are not talking about a specific capacity or objective characteristic, but indicating that he satisfies certain needs. Thus, in investigating the problem of genius we must consider what these needs are, and by what means they are satisfied.

¹ *Das Unbehagen in der Kultur*. Internationaler Psychoanalytischer Verlag, Vienna, 1931. Pp. 136.

² *Das Genie-Problem*. Verlag Ernst Reinhardt, Munich, 1931. Pp. 127.

³ *Genie-Irrsinn und Ruhm*. Verlag Ernst Reinhardt, Pp. 500.

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A man is called a genius when he produces a certain very complex state of mind in his admirers. He must impress them by some achievement, overwhelm them by his energy, conciliate them by his charm, astonish them by something strange, and awe them by something terrible. He will then satisfy their desire for something mysterious and exciting, for something to worship. By what means does a man create this complex impression? Lange-Eichbaum points out that he must be famous, and considers the factors on which fame depends. It is also clear that exceptional ability is a favourable factor, but we must note two points. In the first place, many men of the highest ability have never been considered geniuses, and this is because their achievements have been too rational and unemotional. An artist, for example, is more likely to be considered a genius than a scientist. And in the second place, men without special ability of any kind have been called geniuses. It is true that they have always been accredited with some achievement, but the achievement may in fact have been due to chance or to the co-operation of many factors.

Abnormality is another favourable factor. Lange-Eichbaum maintains that the majority of geniuses have been pathological, while some have been psychotic, that is, definitely mad. The conjunction of abnormality and talent leads more readily to fame than talent alone. An abnormal man feels a stronger urge to express himself, his work is likely to be more emotional, and the circumstances of his life, ending perhaps in a tragic death, will excite both attention and sympathy.

H. KNIGHT.

NEW BOOKS

God and the Astronomers. By WILLIAM RALPH INGE, K.C.V.O., D.D., F.B.A.
(The Warburton Lectures, 1931-1933. London: Longmans, Green & Co. 1933. Pp. xiii + 308. Price 12s. 6d.)

If Warburton Lecturers obeyed their founder to the letter they would hold forth—as Dr. Inge observes—either on Old Testament prophecy or the errors of Rome. The Dean treats of “a *prophecy* certainly, though not quite the kind of prophecy which Bishop Warburton had in his mind. It is the prophecy of modern Science about the ultimate fate of the world we live in” (pp. 1-2). This prophecy is prominent in the writings of certain astronomers who have the public ear; hence the title of this book, which “deals mainly with cosmological theory—the relations of God and the world, of time and eternity, of existence and value” (p. 213), or which seeks to “state and defend the proper attitude of a thoughtful Christian . . . towards the world of space and time, of change and flux, of birth and death” (p. 15). The Dean approaches his problems “from the standpoint of the *philosophia perennis*” (p. 120), or of the “Great Tradition”—by which is meant the confluent streams of Christian and Platonic philosophy, including Aristotelianism. The standing formula is, “The Great Tradition in Philosophy has always conceived. . . . It follows that. . . .” (p. 71). This method—which, perhaps, no writer ever quite avoids—tends to make a philosophical work persuasive only to the persuaded; but in this instance the reader, whether persuaded or not, is sure to find a great deal to approve—if it be only some of the Dean’s many dislikes—which include the mentalism and indeterminism of the “astronomers,” emergent evolution, vitalism, and Progress (with a capital P).

The second lecture—entitled “The New *Götterdämmerung*” (a preliminary version of which appeared in Vol. VII, No. 26, of *Philosophy*)—considers the religious and philosophical consequences of the Second Law of Thermodynamics. This law, Dr. Inge concludes, is fatal to “Modernist philosophy” (*i.e.* to any theory which truckles to time), but presents no intolerable difficulty to the Great Tradition which “postulates an eternal or changeless background, which is untouched by whatever fate may be in store for the visible universe” (p. 28, cf. pp. 69-70). But to this Dr. Inge adds the admittedly unsupported opinion that there will always be a created universe as well as “the realm of eternal and absolute values,” and expresses (it is interesting to note) his personal adhesion to the ancient notion of the Great Year, or of cyclical reiteration.

Concerning the “Problem of Time” (the third lecture, but the theme is continued in those which follow on “God in History,” and “The Eternal World”) the Dean follows a line suggested by the above postulate. He asserts, however, that “We must be on our guard against simplifying the problem by treating either Time or Eternity as unreal” (p. 118). But since his account is even closer to that of Bradley (who is “helpful on almost all subjects”) than to that of Plato, time comes off very poorly. (It may be observed, by the way, that throughout the book Dean Inge is deeply influenced by the author of *Appearance and Reality*. When he asserts, *e.g.*, that “reality is a coherent system which may be viewed indifferently from any point within it” (p. 87), we may wonder what is to become of his Theism as ostensibly distinguished

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from Absolutism.) Time, he maintains, can only be called real by recourse to the doctrine of degrees of truth and reality, which is adopted as intelligible in a philosophy which identifies value and reality. Time is "real," but not "ultimately real." Since, however, the highest values—though non-temporal and non-spatial—require time (and space) "for their manifestation," is it not clear that these should be considered no less real than that which they "manifest"—as for an atomism the void must be no less real than the atoms? Dr. Inge argues for the distinction between earlier and later as more ultimate than that between past, present, and future. The former expresses, it is said, a "logical or teleological" order, rather than a temporal order. But should not the former be recommended as more adequate to the nature of time as we experience it rather than preferred as non-temporal? And what, we may ask, is "teleological" if not temporal?

Time, again, is "as real as the conflict between good and evil" (p. 91), and because of this sinister alliance with time goodness or moral value is not accepted quite as an equal member of the family of absolute values. "Neither Truth nor Beauty depends on Time to anything like the same extent" (p. 119). But if they depend upon time at all, the conclusion ought to be the same—and the Dean reminds us that a scandalous exception is not excused by being small. He realizes—for who does not?—that "without careful definition it" (the concept of value) "may easily cover up the difficulties it offers to solve" (p. 174), and that "it wants much clarification"; but the clarification, I venture to think, is not here. If, *e.g.*, these values are really just what Plato meant by his highest Forms (as he maintains), they cannot be "defined" at all, since they are that in terms of which all else is to be defined. "Value," the Dean observes, "is universal and prior to particular existence" (p. 183). Values are also said to be thoughts in God's mind, or alternatively "attributes" of God. They require, however—how or why, if attributes of God, we are not informed; unless we are to suppose that Dr. Inge travels all the way with Spinoza—"spirits" to "bear," "manifest," and "appreciate" them. One could wish that this last suggestion were carried out more rigorously, but the Dean follows Bosanquet in seeking a theory of values which does not require "persons" to appreciate or to sustain them. He considers "personality" a lower character than "individuality"; the notion of a "person" suggesting an "impervious ego" which he is anxious to escape. But this doctrine of "individuality" turns out, in the hands of its proponents, to be just the denial that there is any individual but the Absolute. Does Dr. Inge simply accept this consequence and introduce the plurality of "spirit" essential to his Christian Theism as a concession to the vulgar orthodoxy he emphatically disclaims? Furthermore, the concept of personality is surely richer than that of bare "spirit," as is borne out by the Dean on page 247, where he speaks of the "undivided personality" as the organ of our apprehension of God. He quotes Bosanquet's observation—as giving his own view—that values are "spiritual worlds, at once objective and subjective." What, if anything, can this mean?

In the concluding chapter Dr. Inge gives a suggestive résumé of the positions of "my master Plotinus," drawing for this upon his Gifford Lectures. Of sensible reality he asserts in this connection that "it is incorrect to call it reality at all." Strangely enough he appears (perhaps inadvertently) to base his confidence in the reality of values on the analogy of sense-perception. "If it be asked how we are aware of non-spatial and non-temporal value, the answer is that we perceive them and know them with as much right and certainty as we perceive and know the things of sense" (p. 123, cf. p. 208). This is upon his own principles a beggarly recommendation. Perhaps we have

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here an illustration of the artificiality of all such repudiations or disparagements of sense-perception, which may not give us knowledge in the highest Platonic sense, but which lies at the root of all that we can ever claim to know. Disparagement of it can only recoil upon the head of its detractor.

Did space permit I should like to debate at length the assumption that there is a single Great Tradition, Catholic and Platonic, which effectively unifies the thought of Plato, Aristotle, Plotinus, and Saints Augustine and Thomas, Spinoza, Bradley, Bosanquet, and von Hügel. Such a procedure, it seems to me, can only eliminate or diminish significant differences where it does not encourage positive distortion. Of this last, needless to say, Dr. Inge is guiltless, but it does appear—to touch upon one instance—that he is accepting incompatible suggestions and positions from the distinguished thinkers last named. While it is certainly possible to learn from both, their antipathy goes so deep that one can only be in active sympathy with one at a time. Or again, is it not missing the force of Thomas's fundamentally realist outlook and empirical starting-point, to see in him merely a version of Platonism as viewed through the ultra-speculative eyes of the later Platonists?

From the viewpoint of Christian theology, moreover, this simple unification of the Neo-Platonic and Christian *Weltanschauungen* will not pass unchallenged. As Émile Bréhier recently pointed out, St. Augustine tried this synthesis, but very soon gave it up. M. Bréhier concludes his important study¹ as follows: "Nous avons vu les essais, toujours vains, du christianisme pour fixer un de ces moments" (Platonism, Aristotelianism, and the philosophies of the seventeenth and nineteenth centuries) "pour s'en emparer; mais on ne peut pas plus parler d'une philosophie chrétienne que d'une mathématique chrétienne ou d'une physique chrétienne." Whether or not one accepts M. Bréhier's conclusion, one may feel that in this sort of Great Tradition the specifically Christian view is bound to fare badly.

Since the Dean's interesting book is itself polemic, I have ventured, in this review, to consider briefly a few points raised by some of his central positions rather than to outline the work in greater detail. Thus much that is timely and—as goes without saying—well said in these Warburton Lectures passes without comment. It may not be unfair to the book as a whole to say that its most suggestive matter is of the nature of *obiter dicta* and occasional comment, and that it is more effective in criticism of the "astronomers" than in construction of an "axiological philosophy," for which a great deal of sober preliminary inquiry yet remains undone.

I have noted two slips only: on p. 106 n. read *Nature of* and on p. 171, l. 5, read *graciously*.

RALPH E. STEDMAN.

The Horizon of Experience: A Study of the Modern Mind. By C. DELISLE BURNS. (London: George Allen & Unwin, Ltd. 1933. Pp. 372. Price 12s. 6d.)

It is generally recognized that we are living in a revolutionary age, not merely in the departments of industry and politics and the thought and emotions appertaining thereto, but in all the sciences and arts, in literature, personal and social ethics and religion. It is for philosophy attempting to understand, present, and interpret all aspects of experiences in their relations to one another, to give attention to this revolutionary process, and to assess

¹ "Y a-t-il une philosophie chrétienne?" in *Revue de Métaphysique et de Morale*, No. 88 (1931), pp. 138-162.

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its meaning and value. Philosophers of the chair are perhaps seldom well-equipped for such a task. They are apt to be too much immersed in abstract thinking, with too slender attachments either to the "common sense" which infuses the thought and feeling of ordinary men and women, or to the new achievements in the particular arts and sciences, to give philosophic attention to the process as a whole. Moreover, there is always the danger arising from intellectual vested interests, the conservative attitude of an accepted system, which tends to make the mind inhospitable to troublesome newcomers. Now Dr. Burns has the great advantage of close personal experience in many of the fields where new truths, new hypotheses, new forms of art, new social experiments are breaking in. He is thus able to bring a singularly well-informed and sympathetic mind to bear upon the explanation of the philosophic significance of this revolution in the ordering of human thought and conduct. We ordinarily think of new discoveries in the sciences and arts as adding to the existing stock of knowledge or technique. That, however, is an error, due in part to a too atomistic view of knowledge and of art in general, but largely also to an imperfect understanding of the part played by "the horizon of experience." For it is horizon facts, and the knowledge, the thoughts, and emotions, which, at first faintly envisaged, are drawn in by the urge of discovery, that are the key to the understanding of the new world, at once fascinating and perilous, in which we are living.

The greater part of Dr. Burns's work is devoted to bringing out the meaning of this generalization by illustrations from the various arts and sciences, a keen investigation of what is happening to these at the horizon. While in modern science the new facts and theories of radio-activity, relativity, and the quantum have transformed the very bases of the physical sciences, and while in the arts new forms of music, dancing, painting, sculpture, and architecture have largely displaced the older forms by the establishment of new interests or values, equally significant horizon facts are penetrating personal morality and public policy—in every line of conduct. The perils of such change are often exaggerated, because it is believed that all continuity is broken and that past standards and customary valuations are simply "scrapped." But this is a hasty and erroneous interpretation. Though there is everywhere a tendency of old-established ways and standards to become obsolete, it is not a question of wholesale clearance, or even of cutting away "dead wood." The new horizon values come in to utilize old values by a process of transmutation and invigoration which carries a true continuity within the novelty.

Dr. Burns, in a series of fascinating studies of what actually happens in the different lines of experience, presents a powerful plea for adventure. In the arts and sciences, as in industry and government, in ethics and religion, the reliance on completed systems, backed by custom and authority, can give no sense of security. Order can only be maintained by progress, that is, by the willed attainment and assimilation of horizon experience. The art of such attainment, the process of discovery, is most clearly seen in the fine arts, for there the creative activities work most freely, and Dr. Burns gives close attention to what actually takes place when a musician, a painter, or a sculptor is at work. The truth is then disclosed that he doesn't quite know what he is doing, or what he is after, until he has achieved it. This, of course, also applies to the processes of speculation and hypothesis in the sciences, the early fumbling and more or less blind "trial and error" from which experimentation and new laws emerge. But such new horizon values, at first the personal achievement of artistic or scientific genius, only attain their end in rearranging and transmuting past values of truth, beauty,

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or goodness as they pass into receptive appreciation and understanding by other minds.

Dr. Burns prefers to represent what takes place in the attainment of new values as a "pull" rather than a "push." He strives perhaps overmuch to separate his interpretation from any biological or quasi-philosophical doctrine of evolution, as implying that history is an unfolding of things always "there." The presentation of his horizon values in terms of "mutations" would be wholly unacceptable to him. He seeks to release life as much as possible from the determinist control of the past and to give the widest scope, I will not say to chance or miracle, but to determination by the hitherto non-existent. And yet his analysis of what occurs in discovery seems to yield as much importance to the past as to the future. For the belief in new truths and values to be discovered, the zest for the adventure of discovery, and the sense of the direction in which to look for the horizon facts, all involve the conception of a *horizé* more of the nature of a push than a pull. Probably Dr. Burns would admit that both are operative forces, though his stress is on the greater "freedom" which the "pull" seems to carry. For he clearly realizes how different types of genius, and different races or grades of humanity, will make different selections among the horizon facts. His treatment of the horizon does, of course, dispose completely of the cruder determinism of last century, for that implied that the history of a person, or a nation, or other society, repeated itself, that is, it excluded "novelty" in the true sense of that term.

A special interest attaches to the subtle defence which Dr. Burns gives for adding deity, in the sense of "the divine," to goodness, truth, and beauty in the category of general values. The enthusiasm of religion and its direction beyond the bounds of human morality appear to him to demand this place for the "divine," though he admits that "the common man," on whose nature he much relies for the roots of values, has little, if any, trace of it. He rightly disregards the fact that religion is a frequent breeder of illusions. For that objection in a considerable measure can be brought also against the arts and sciences, especially in the early struggles of any science towards exactitude. He sees and values highly a "new sense of deity." "It is not implied that the enthusiasm for fundamental social changes, the finer quality of human sympathy and the new delicacy of perception in a genuinely 'cultured' person actually constitutes a new religion. Such factors in experience do not, indeed, prove the existence of a keener sense of deity. But they are the *first traces* of a new religion and of a clearer vision of those aspects of deity which are now on our horizon" (p. 294). In this religion there is a place for what used to be called mysticism, those rare experiences outside the ordinary processes of thought and feeling, by which new heights of understanding of and of sympathy with the whole may be attained. How far, or whether there is a whole, Dr. Burns, however, seems to leave an open question; as far as his present interpretation goes, it is more pluralist than monist.

This is a very imperfect account of what I regard as a most important contribution to philosophy. Though, chiefly owing to the imperfections of language, made for common purposes by ordinary men and women, it is difficult in places, there are so many passages of entrancing interest that it must rank as one of the greatest and boldest intellectual adventures of our time.

J. A. HOBSON.

NEW BOOKS

Six Theories of Mind. By C. W. MORRIS, Ph.D., Associate Professor of Philosophy, University of Chicago. (Chicago: University of Chicago Press; London: Cambridge University Press. 1932. Pp. xi + 337. Price 20s.)

We have far more systematic knowledge of the nature of matter than we have of the nature of mind. Matter is, of course, much easier to study. Of the mind we have, however, a great deal more knowledge than we commonly give ourselves credit for, but the task of systematizing it is tantalizing. It is the standing paradox of things that the most intimate is the least comprehended, though the reason may be the simple one that we keep on trying to comprehend mind with the ideas and methods which have been of signal use to us in the study of matter. Psychology, that is, may soon have to repent of its alliance with the natural sciences. In the meantime the retreat, forced by this alliance, of philosophers away from the psychological to the properly philosophical problems of mind may result in insights which would provide a basis for a new and more sensitive psychology. The primary properly philosophical problem is that of the very definition of mind, and this is Professor Morris's problem, though his solution is quite antipathetic to the foregoing remarks. His book is a survey of theories which have already been offered, with the addition of an outline of his own solution, the detailed development of which is reserved for a future book.

He claims that all theories of mind fall under one or other of six types. He has elicited six categories and grouped various historical and contemporary theories according to the categories they emphasize. The categories are substance, process, relation, intentional act, substantive and function. The inadequacy of this mode of classification becomes evident when we find that, quite consistently, Berkeley is placed with Aristotle (substance), Bergson with Hegel (process), and Schopenhauer with Dewey (function). The affiliation of each theory is ruled by an abstract character instead of by its total and most distinctive bearing. Still, the classification is suggestive, and the examination of the several theories has independent instructiveness. With the exception of Critical Realism, each theory is sympathetically expounded and sympathetically criticized; the sections, indeed, on Laird, Lovejoy, Strong, Russell, and Dewey have passed under the scrutiny of their respective subjects. I admire the mastery with which the large and difficult material has been handled, and recommend the book as a valuable introduction both to the problem in its generality and to the main solutions of it which have so far been put forward.

To enter into details would be to become niggling. A fairer idea of the book is likely to emerge if I indicate first the meaning of the six categories and then what Dr. Morris requires any theory of mind to do. Mind as substance is, of course, an old notion, dominant until Hegel, and like most contemporary students Dr. Morris rejects it. He finds it too simple, highly ambiguous, and empirically unverifiable, and reminds us that the new logic of relations claims to be able to get along without it. The penultimate criticism reveals Dr. Morris's bias, but surely to require of so general a philosophical idea as that of substance that it be empirically verifiable is tantamount to reducing philosophy to a natural science. By substantive the author means a quasi-substantial unity without the division into substratum and attributes which the idea of substance is usually taken to involve; mind as substantive means a system of elements each of which would still be mental even if not integrated into a system. Under this heading Critical Realism is discussed, but the varying views of mind underlying the one

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epistemology of this school and Dr. Morris's strong antipathy to this epistemology make this section very unsatisfactory. By process is meant not an activity of some entity, but an unsupported, entirely original activity. The Hegelian view of mind as expounded by Hegel himself, Bradley and Bosanquet, and the views of Bergson and Gentile here receive treatment. The chapter on mind as intentional act covers Meinong, Husserl, most of the English realists, and Whitehead. Here Dr. Morris concentrates on the English insistence on mind as awareness to the neglect of their equal insistence on that referential character of awareness, that intentionality, which he acknowledges in the title of his chapter. Mind as function, represented by Dewey (with a glance at Mead), and supported by Dr. Morris himself, means mind as (a) an activity not of a mental substance or substantive but of a bodily organism; (b) instrumental to the needs of the organism; (c) instrumental to action; (d) the rôle which natural events assume when they point to, stand for, symbolize, other natural events. Dr. Morris sometimes passes from one to another of the first three of these meanings as though they were synonymous. He is pleading the case of pragmatism, but his admission that the organism has intellectual—more than biological—needs takes all the pragmatic sting out of (b) and negates (c), or at any rate reduces this to the merely pious belief, expressed on p. 281, that it must be true even where there is no evidence for it. His main emphasis, however, is on (d). For him the distinctive feature of experience is that its elements (the objects of perception and thought) become significant of one another—fire of heat, St. Paul's of Ludgate Hill, water of purity, and so on; and he defines mind as this relation of significance or, to use his own term, symbolism. Personally I do not like this fashionable overworking of the term symbolism, muddling under it all forms of association (spatial, temporal, and that subjectively determined), logical implication, and causal connection; and the definition of mind as consisting essentially in this wide symbolism omits what in some pages Dr. Morris insists should be preserved, namely, the feature of awareness, or, as he prefers in his fear of subjectivism to call it, givenness. Doubtless he will clarify this and the other points when he comes to state his theory systematically in his next book.

Dr. Morris believes that any theory of mind, whatever conclusions it may embody, must retain two positions, namely, the givenness of perceptual objects and the mediateness of the knowledge-process (it is clear from the text that the only mediation he is thinking of is that of the causal sequence of physical and physiological events which precedes perception). It is, we think, the error of New Realism that it holds exclusively to the first, of Critical Realism that it holds only to the second. He holds them together by maintaining that the interaction of an event with a percipient organism, an interaction obviously mediate in the sense noted, brings into existence another event, which is the object and which is given (he carefully avoids saying "directly apprehended"). This, he says, is realism, because the given object, though produced in and by the interaction, is an existent in the same natural order which includes the interacting event and organism. But this is realism only if realism means the denial of subjective idealism. Dr. Morris certainly denies that the object of perception is a property or possession of the subject (which for him can only mean the organism), but he denies also that it is a property of the thing which we suppose ourselves to be apprehending. Its being a "real" *tertium quid* is here irrelevant; it is a *tertium quid*, and this makes the theory in its epistemological essentials the same as that of Locke, and unsatisfactory for the same reason. On such a view of mind as Dr. Morris propounds the term realism, together with its correlate

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idealism, loses all meaning. If mind is not an entity *sui generis*, but simply a "symbolic" relation among such physical things as enter into a certain sort of interaction with a certain sort of organism, nothing can be either in it or out of it.

The obscurities mentioned are mostly due (apart from possible misunderstandings on my part) to Dr. Morris's desire to press to the uttermost the denial of mind as stuff, event, or original process—to be blunt of mind in any sense that offers even the slightest excuse for an idealism of the grand type. In him, as in so many other pragmatists, the ruling interest is not really epistemological but metaphysical, and the metaphysical interest is in an uncompromising naturalism. But, also like many pragmatists, he argues by predilection in epistemological terms; in this book he does so almost exclusively. Mind is unrecognizably cut down to what a naturalistic theory of knowledge requires it to be. It is simply knowing, or rather knowledge; what knows is the body; and what is known is something causally produced by the interaction between the body and the things which, though on this very theory admittedly unknown, must be known if we are to assert with any evidence that it is *their* interaction with the body that gives rise to the known object. Clearly I am unsympathetic to Dr. Morris's views, but I must repeat that his book is an able survey of other views and deserves to be carefully studied.

T. E. JESSOP.

The Place of Minds in the World. Gifford Lectures at the University of Aberdeen, 1924-26. By SIR WILLIAM MITCHELL, K.C.M.G. (First Series.) (London: Macmillan & Co. 1933. Pp. xxv + 374. Price 12s. 6d.)

In his preface to this very important work the author states that he has recast the arrangement of his matter in the interval since the delivery of the lectures, and that though the argument will only be completed by a sequel to the present volume, which will deal with the Power of Minds, the book now issued is left "self-contained." It is none the less to be regretted that it was not possible to publish the two volumes simultaneously as a single work. The texture of the author's thought is too closely woven to make the division of his work into two books, separately issued and under two titles, as appropriate as it may have sometimes been in the case of other Gifford Lecturers. I do not think that the present volume is quite so "self-contained" as the author claims. Certainly the reader will feel that adequate appreciation of a philosophical work as difficult and as profound as this will be possible only when he has been able to study the sequel. The present notice will not therefore attempt to do more than give in a very summary and general fashion an indication of the main position adopted by Sir William Mitchell, and of the ground covered in the present volume.

With so much reason for gratitude to the author, it may seem ungracious to begin with a note of complaint. I shall, however, venture to express the deep regret, indeed the consternation, which many readers will probably feel at finding that the book has no index. I am convinced that Sir William's earlier important work on the *Structure and Growth of the Mind* would have been far more influential than it was had it not been similarly handicapped. Such a suggestion is, no doubt, highly uncomplimentary to the readers of philosophical books. The reader ought to be prepared to make his own index. But the fact has to be faced that without one a book does its work at a severe disadvantage. Is it too late to petition Sir William to indulge our human weakness so far as to equip the sequel volume with the aid he has denied us here?

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It is true that we have to thank him, in this as in the earlier work, for a very careful analytical table of contents. But the reader is hampered in his references to this, helpful as it is, owing to the concentrated difficulty of the book, a difficulty which in the initial epitome is compressed into an intense obscurity. The book is undeniably hard, though as undeniably rewarding, reading. In part this difficulty is due to the regions traversed; we are conducted, for instance, through the history of the most recent physical science, relativity theory, quantum theory, and wave mechanics, in order to illustrate and fortify the author's argument, in a way that displays his own great erudition and familiarity with the literature but tends to perplex the less scientific reader. But the difficulty of the book is also due to the author's style, vocabulary, and characteristic quality as a writer and thinker. It is the price to be paid, though a price worth paying, for deliverance from the slick and the glib, from the trite phrase and the over-familiar presentation. Sometimes the result is a darkly cryptic or elliptical statement; often we have phrases of splendid vigour and expressiveness.

Sir William is not engaged, as for instance Dr. Whitehead is, in developing a technical philosophical vocabulary for fundamental notions; but he has a vocabulary of his own, too, a vocabulary of exposition. The reader has to be very much on the alert to recognize the special meanings which attach to his phrases, such as "gulf," "the line of life and the correlation-line," "the royal road," meanings which are, as the author would say, "taken for granted" the second or third time they are used. But his new mintings often admirably supplement the old well-worn familiar currency.

The main theme of this volume is the presentation of the author's view as to the nature of knowledge. He seeks first to display the inadequacy of certain contrasted accounts by which in one way or another the nature of cognitive (perceptual and conceptual) experience has been misunderstood. He considers, secondly, the problems to which these accounts give rise, and how these problems are met in terms of the account which he himself puts forward. And, thirdly, he seeks to illustrate and confirm his own interpretation by a review of, and a commentary upon, the development of the most recent theories of physicists. This, very roughly, is the subject-matter of the three queerly named parts into which his book is divided.

"Minds in living prove themselves, and . . . knowing is living, and not only a means to living. We may call the fact our principle" (p. 6). Neglect of this principle, or failure to interpret it concretely or comprehensively enough, leads us into sophistication, and especially gives rise to what Sir William Mitchell, with a touch of Heraclitean mystery, terms "the Gulfs." He means, I take it, interpretations which sever mind from its world, the world of real objects, and make thereby a chasm which proves unbridgeable, for instance an insoluble psycho-physical problem, or a representative theory of knowledge that presents us with an impasse. We come up to one or other of the "gulfs" if we take thought merely as instrumental, or make the confusion between object and stimulus, or take sensations as impressions, or assume that real things cannot be known, or again (the "practical gulf") make the severance between an objective world of objects to be sought and a subjective world of feelings to be satisfied.

On the other hand, the gulfs are transcended if we are faithful to the "living line." The fundamental error about the connection between mind and nature is to confound the living line and the correlation line. The living line is not within the brain, but between seeing the light and the light, hearing the music and the music, counting and number, plotting and the plot. The

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correlation line within the brain is between seeing the light and the corresponding brain events" (p. 24).

This familiar similitude of light and seeing (only it is of course more than a similitude) boasts a noble lineage, but it is used repeatedly by the author with a force of his own to illustrate the inseparability of mind and its objects, though by no means in the manner of traditional idealism. Thus (p. 276) "theories are organs related to understanding as eyes to seeing, and related to their objects as eyes to light." "Reason makes things intelligible in the sense that the eye makes them visible" (p. 196). But if we follow faithfully "the lead given by the living line" we are in no danger of falling into the fallacies of subjectivism or positivism. "Following it (p. 190) we see nature to be partner with the organs of our grasp, including the organs that we create. The partnership is an articulation, not an echo. Theories prove, when they succeed, that they can be as physical as the eyes and brains that we inherit."

If one may be pardoned for applying so well-worn a label to one himself so fastidious in avoiding triteness of phrase, one would say that the author is in the main an uncompromising realist in his epistemology. "No object is made mental, nor altered, by being felt, imagined, or known in any way" (p. 33). "When your ideas quarrel with mine, and when they agree, it is because they claim to grasp the same object as mine, and to find it independent of our grasp" (p. 45). So too (p. 138) "such objects as the beauty of things, and their meanness or grandeur, are altogether found, and not added as a fancy. Yet they exist only for minds." And when I remember, I have not got merely some present substitute of the past event somehow "in the mind," but the very past itself. "It is yesterday itself, not a present image, that is held and is the sole object of my present thought. . . . As, in doing, I make real the very thing already ideal, so in recalling I make ideal the very thing that was real" (pp. 154-5).

In the third part of the book, which takes up nearly half the entire volume, the author reinforces his interpretations by a masterly survey of the living growth of the scientific understanding of nature in the prolific and bewildering development of contemporary physics. We are asked to follow what he calls "the royal road." This, if I may venture on a weak paraphrase of his account, is the way thought takes when ideas and theories become not merely instruments for grasping natural fact (to be modified and improved as new facts call for acknowledgement), but themselves the way of discovery by compelling their own supersession under the pressure of nature, our "partner" in the whole enterprise. "A notion is the means not merely of grasping but of seeking; and it secures an improving hold by taking one that must yield a better, if it fails when pressed home. That is the ambition of the royal road which we are to follow" (p. 195). In escorting the reader along the path of scientific discovery "from surface to depth in nature," Sir William builds up a formidable case against the anti-metaphysical positivism of the Mach type, still so popular among scientists. And it is a timely reminder, when another Gifford lecturer, Sir Arthur Eddington, can write as though the table of ordinary common sense were somehow less real than the scattered rushes of electronic energy into which physics analyses it, to be assured that "no discovery beneath the surface proves or disproves the physical existence of anything found on it. Physics confines itself to making the surface intelligible. The result has been to transform all views of nature copied from the surface, but still to question nothing there, nor prove it, for the surface proves itself" (p. 18).

But I have been already almost tempted into the sort of comment which

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ought, as I have suggested above, to be deferred until the reader has the whole of Sir William Mitchell's argument before him in its entirety. Let me therefore conclude this notice by repeating that this is a book of the first importance, and that we shall await with eagerness and excitement the issue of the sequel.

J. W. HARVEY.

The Conception of God in the Philosophy of Aquinas. By ROBERT LEET PATTERSON, Ph.D., M.A., B.D. (London: George Allen & Unwin, Ltd. 1933. Pp. 508. Price 21s. net.)

The appearance of this able examination of the fundamental positions of the natural theology of St. Thomas may be taken as evidence that the Angelic Doctor is now accepted by English students of philosophy, outside the ranks of those for whom he is invested with the prestige of the authority belonging to an approved Doctor of the Church, as one of the world's great thinkers, the importance of whose contribution to philosophical speculation no longer needs to be defended against a tradition of anti-scholastic and anti-theological prejudice, but may be taken for granted, and its value criticized in detail with the same combined respect and freedom as we are accustomed to see used in regard to Plato or Aristotle, Descartes or Kant.

Dr. Patterson has greatly helped his readers by the abstract of his conclusions which he has prefixed to his work. Here we learn that (1) while disputing the distinctness in principle of the five proofs of the existence of God enumerated by St. Thomas, he holds the principle of these proofs to be sound, and not to have been destroyed by the Kantian criticism; (2) argues against St. Thomas that the distinction drawn by him between the knowledge *that* God is and the knowledge *what* he is, is illegitimate; that what Dr. Patterson calls his doctrine of degrees of being (which is by no means to be confused with Bradley's doctrine of degrees of reality) infects the world of finite beings with unreality; and that he fails in his attempt to harmonize the Aristotelian with the Christian conception of God; (3) points out certain difficulties in the doctrine of creation which constitutes so marked a distinction between the philosophical theology of the Christian doctors of the Middle Ages and that of their master Aristotle; and (4) discusses St. Thomas's view of the possibility and extent of a mystical knowledge of God attainable during this earthly life.

The present reviewer would be inclined to agree with Dr. Patterson with respect to (1)—Father D'Arcy, by the way, is of the same opinion as to the essential identity of the several proofs of God's existence—and to a considerable extent also as to (2). Nevertheless, both in respect of the doctrine of degrees of being (we might perhaps better describe it as the doctrine of a distinction between Being and beings), and also in respect of (3), the doctrine of creation with which it is so closely connected he is of opinion that what Professor Gilson in his recent Gifford Lectures on *L'esprit de la philosophie médiévale* picturesquely calls *la métaphysique de l'Exode*, with its ascription to God of the totality of being, while at the same time it denies that his being includes the finite "beings," which are on this view not portions of God or emanations of God, but his creatures, requires a fuller examination of its relation to the great systems of modern philosophy than it has yet perhaps received either from writers too ready to regard it as a standpoint left behind by the progress of thought or from those who (like Professor Gilson himself) are, on the other hand, too much disposed to regard those systems as the "ruins" of a synthesis destroyed by the indifference of

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sixteenth-century reformers to the importance of the contribution made by Christianity to the understanding of the universe. With respect to Dr. Patterson's *fourth* point, I should say that, apart from any consideration of St. Thomas's personal temperament, good historical reasons can be given why he and other mediaeval thinkers did not allege what we call "religious" (which is by no means to be restricted to "mystical") experience as a proof of the existence of God.

Dr. Patterson is unquestionably right in paying close attention to St. Thomas's theory that, where the same predicates are used both of God and of creatures, they must be taken neither as *univocally* nor as *equivocally*, but as *analogically* applied to both. For this theory is at once vital to his theology and the source of many difficulties. But our critic is perhaps too much concerned to convict his author of inconsistency in respect of the question whether *being* may be called a *genus*. Because he speaks incidentally of *being* as the *genus* which is subject to the art of God as the class of houses is to that of the builder, he is not to be supposed to have forgotten the Aristotelian doctrine that "being" transcends the categories, or to have committed himself to the confusion, which he elsewhere imputes to David of Dinant, between the utter *diversity* of God, as pure act, from prime matter, as pure potency, and the *difference* of one species from another within the same genus—a difference which (David suggested) could not be discovered between two *simple* beings, such as God and "prime matter" were alike held to be.

Whatever dissatisfaction one may feel with this or that contention or argument of Dr. Patterson's, his work is a serious discussion of real difficulties presented by his author's philosophical theology which is worthy of the attention of every student of St. Thomas. It is not, however, free from errors, not only of the press (there is an unfortunate misprint of *quia est* for *quid est* on p. 256, l. 16, in a passage wholly concerned with the difference between the two), but sometimes also of translation. Throughout the book inaccuracies in the printing of the Latin passages are frequent; and there are numerous mistakes in translation which suggest less familiarity with Latin in general and mediaeval Latin in particular than one could wish in a commentator on St. Thomas. For example, on p. 61, where "any circulation is finite" should be "any revolution of it" (*eius* is left untranslated), *i.e.* of the sun, "is finite"; and on p. 486 the whole sense of a long passage is misrepresented owing to the failure to observe that the *hominis operatio propria* is distinguished from and not identified with the *operatio quae sibi intellectualibus inhaeret*, while this latter expression is itself misunderstood. Dr. Patterson has an odd habit of translating *quodammodo* "in some mode," thereby suggesting a technical meaning which is usually absent. In the passage from Aristotle, *De Anima*, iii. 7, quoted on p. 67, ἄλλο εἶδος τοῦτο κινήσεως does not mean—though, in so taking it, Dr. Patterson is following Hicks—"a different species of motion," but (as Professor J. A. Smith renders it) "a different kind from movement." In the quotation from Clement of Alexandria (p. 102, n. 1), the first word Ἀπόμνην is of course a misprint for Ἀπόμνην; αὐτῶν in l. 3 cannot refer to ἀράξεις, but to ὁ ἐποπτικός τῶντος; and the last clause should be rendered "and yet they have been written of him" (*i.e.* in the Scriptures).

In the second note on p. 410 Dr. Patterson is not unnaturally surprised to find St. Thomas apparently contradicting himself in two successive sentences by saying both that "the things that now are" *habent potentiam ad non esse*, and that some of them are *necessaria absolute*. He acutely suggests that *quae iam sunt* must refer only to sublunary things. No doubt

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this is so; yet, as it stands, it cannot be so taken without doing violence to the text before us; and it seems to me that we must certainly emend *iam* (which is quite pointless in the context) to *ima*, a word which gives the required sense and, as written in manuscripts with the *m* represented by a mark above the line, is very easily confused with *iam*.

By the way, the Oxford translation of the *Metaphysics* should be attributed to Dr. Ross, the present Provost of Oriel, and not to "Smith and Ross," the original editors of the whole series.

C. C. J. WEBB.

Proclus, The Elements of Theology. A Revised Text with Translation, Introduction, and Commentary. E. R. DODDS. (Oxford: Clarendon Press; London: Humphrey Milford. 1933. Pp. xlviii + 340. Price 30s.).

Both Professor Dodds and the Oxford University Press deserve to be heartily congratulated on the publication of this very arduous and thorough piece of philosophical scholarship. The work has been executed with all the usual excellence and care of the Clarendon Press (no slight task in view of the fullness of the *apparatus criticus*), and it is, doubtless, due largely to the well-known diligence of the Press's proof-reader that hardly a misprint is to be detected in all its pages. Professor Dodds's own task has been an elaborately complicated one, with several distinct departments. He has had, in the first place, to establish the true text of a work hitherto wretchedly disfigured by the ignorance or incompetence of its two previous editors, Portus and Creuzer.

This has involved the examination and collection of a large number of MSS. both of the Greek text and of the thirteenth-century Latin version (as yet unprinted) of William of Morheke, as well as the collection of curious information about the Georgian and Armenian translations, and an elaborate attempt to construct a "family tree" of the known MSS. Further, the meaning of the often obscure doctrines of Proclus has had to be fully discussed, as they have had to be set in the right connection with the teaching of Plotinus, the one man of outstanding original genius among the Neo-Platonists, as well as with the post-Plotinian developments due to writers like Iamblichus and Syrianus, whose work has only survived in part; and Professor Dodds has generously added to his task by gallant attempts to trace the filiation of Plotinus himself to Plato backwards through a series of precursors, the famous polymath Posidonius being the most important of them—whose writings are no longer extant. It has also been necessary to take account of the singular way in which the "theology" of Proclus, devised as a sort of last refuge for traditional Hellenic polytheism, was, within the century after his death, superficially Christianized—in a way—in the writings fraudulently fathered on "Dionysius the Areopagite," and thus furnished an important element to the great philosophical constructions of the thirteenth-century thinkers, and through them left a permanent mark on the thought and language of the great modern philosophers from Descartes to Leibniz. Finally, the mere task of translation, involving as it does the finding of satisfactory equivalents for the very elaborate technical terminology of a largely extinct "rationalism," must have been itself sufficiently arduous.

Professor Dodds appears, so far as I can judge, to have executed these very different parts of the duty he has imposed on himself in a way which demands very high praise. The relation of the MSS. sources for the text is discussed with evident scholarly competence, the critical apparatus is clear

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and full; [of the accuracy of the actual collations, of course, only one who had examined the MSS. for himself as widely as Professor Dodds could speak with authority:] and his own "emendations" are eminently sober and often absolutely convincing. What he has done in this way for the text of his author will only be fully apparent to those who have had in the past to wrestle for themselves with the *editio princeps* of 1618, or the amazing productions of Creuzer. The difficulty of translation has been admirably overcome. If ever I have felt any misgiving about the terminology adopted, it has been almost exclusively on one point, viz., on that of a satisfactory equivalent for the word *ὑπόστασις*, often rendered in the English *substance*. Here I own to a certain misgiving due to the fact that *substance* in our philosophical vocabulary retains all the suggestions of the Aristotelian *οὐσία*, and that *ὑπόστασις* and *οὐσία* are not exactly coincident terms. (Thus, for example, the "persons" of the Christian Trinity were quite correctly described by the theologians as *ὁποστώσεις*, but no theologian could have admitted that they can properly be called *substantiae*.) At the same time I freely admit that if the word *ὑπόστασις* was to be translated at all, and not merely transliterated, I do not know of any alternative rendering which would not have been open to even graver criticism. Professor Dodds has probably done the best that could be done in the matter, though I could wish that he had somewhere called attention to the point that *substance* as a rendering of *ὑπόστασις*, must not be equated with the *substantia* (*οὐσία*) of Aristotelianism. In every other way the English reader will, I believe, find the translation a thoroughly adequate substitute for the actual Greek text (unless, perhaps, as very minor points, I might suggest in Prop. 86 *ἐν ποσῇ* means in *number* rather than in *quantity*, and that in Prop. 97 *coincidence* would perhaps convey the meaning of *ἀπὸ ταύτοματου* rather better than the word actually chosen, *spontaneity*. It occurs to me that Leibniz, who make so much of *spontaneity* in his own metaphysics, would have absolutely denied, no less than Proclus, the presence anywhere in the world of the random variation which Proclus here calls *τὸ αὐτόματον*.)

The supreme services of Professor Dodds to his author lie, however, mainly in the field of *interpretation* of his doctrine in its historical relation to that of predecessors and successors. Even in the mangled text of Portus or Creuzer an intelligent reader can contrive to make out the sense of the author not unsatisfactorily if he sits loose enough to their unintelligent punctuation. The chief need of the student was for an intelligent treatment of the questions: (1) exactly where the world scheme of Proclus differs from that of Plotinus, and how far the departures are due to his own initiation; and (2) how much of it, and in what form, has passed into the thought of Christian scholasticism. And it is on these points, especially on the first of them, that I find Professor Dodds's Introduction and Commentary everywhere enlightening. The first question is actually treated more fully than the latter, and I think the writer would at once admit that it is the one with which he is more at home. The illustrations of Proclus from thirteenth-century thought, like that of St. Thomas, are welcome and apposite; but a certain unfamiliarity with the subject is betrayed, e.g., by the statement that Christian thinkers taught, as against Neo-Platonists, the "Creation of the world in time." (What they really taught was something rather different, that time, as we read in the *Summa Theologica*, was "created along with the world," a formula expressly intended to exclude the notion of an "empty time" *before* the creation, and quite in keeping with the marked trend of present-day speculation in physics.) And it is unfortunate that by some mere oversight language should have been used on p. 251 that would inevitably suggest to a reader unacquainted

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with the facts that Athanasius "echoed" the thoughts which had been taken by Augustine from Plotinus, since of course Professor Dodds knows the real chronology.

For the pains which have been taken over the tracing of the ancestry of Proclus's ideas there can be nothing but praise. The effect, I believe, is once and for all to reduce the originality of Proclus within very narrow limits; indeed, I think Professor Dodds fully makes out his case for the view that the innovations on Plotinus in the *Elements of Theology* are very largely due to Iamblichus, and that the most striking of them all, which does not appear to owe anything to Iamblichus—the intercalation of an order of "divine henads," identified with the gods of the traditional mythology, between the "One," and the series of "Intelligences," is the invention not of Proclus himself, but of his teacher at Athens, Syrianus. I would also say at once in this connection that I fully accept Professor Dodds's remarks on the impossibility of making as close a parallel as I once tried to make, in an essay which he perhaps honours with more attention than it deserves, between this curious doctrine and the account of the attributes of God in Christian scholasticism. I can only apologize for my own exaggeration by pleading that the thought in my mind, not sufficiently developed for lack of space, was that the scholastic doctrine itself has close affinities with Philo's teaching about the *δυνάμεις* of God (also referred to in the same connection by Professor Dodds). I meant, in fact, that all these doctrines are attempts in some way to find a mediating term between the world of multiplicity and a principle of absolute unity. But I admit at once that it ought to have been added that they do not all construct the bridge in the same way.

When the attempt is gallantly made to get back behind Plotinus himself and to seek the antecedents of his doctrine in the now utterly lost writings of thinkers who connect the third century A.D. with the Old Academy, it must be admitted, I suppose, that we are on ground where certain results are never likely to be obtained. I take it, in particular, that Professor Dodds himself would grant that the interesting speculations, in which he tries to follow some modern German students, in reconstructing the ideas of Posidonius are problematical to the last degree. Perhaps our greatest living Latinist went a little too far in the opposite direction when he claimed it as a merit of his *Manilius* that Posidonius is never named in its pages, but it still remains true that after all we know very little in detail of what Posidonius taught, and that to attempt to reconstruct his "system" is building a house of cards. There is a lesson to be learned from the fate which seems already to have overtaken similar modern attempts to "reconstruct" a much earlier writer, Antisthenes, out of a couple of allusions in Aristotle.

I would add that I believe Professor Dodds has finally established the—to me—unpleasant fact that, though the *Elements of Theology* only allude to the matter in a covert way, Proclus was an adept in the "theurgy" into which the noble philosophical religion of Plotinus was degraded by Iamblichus and the Syrian school. This is perhaps not surprising. It is, I think, impossible not to feel that with all his intellectual acuteness and all his respect for Hellenic traditions, Proclus was not really a "religious man"; he had no living faith, as Plotinus had, and its place had to be taken by superstitions about the "symbols" of theurgy, as it might have been taken in a different age by a cult of "relics." His knowledge of the letter of Plato must have been infinitely more correct than that, e.g., of St. Augustine, but the "spirit and the life" of Platonism came down to a later world though Augustine and not through Proclus.

A. E. TAYLOR.

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History of Indian Philosophy in Eight Volumes, Vol. 7: Indian Mysticism.
By S. K. BELVALKAR, M.A., Ph.D., and R. D. RANADE, M.A. (Part 1 :)
Mysticism in Maharashtra. By R. D. RANADE. (Poona: Aryabhushan Press. 1933. 1p. 46 + 496 + 10. Price Rs. 10. Library edition, Rs. 15.)

This History of Indian Philosophy, now in progress under the patronage of the University of Bombay, is the most comprehensive one yet undertaken. Only two volumes have so far appeared, viz., vol. 2 (dealing with the Upanishads) and vol. 7, part 1, now under review.

The Preface (35 pages) makes a feeble attempt at comparing the mystics of Maharashtra (the greater part of which country now belongs to the Bombay Presidency) with those of the West, especially Jñāneśvara with Plotinus, which is rather hazardous (the comparison of Chokhāmēlā, the untouchable, with Jacob Böhme is absurd), and discusses in a general way some points, such as the "Dark Night of the Soul." The Introduction then gives us a preliminary survey of the development of mysticism in the several parts of India. Then there follows Part I dealing with the "Intellectual Mysticism" of Jñāneśvara and his age, and covering nearly one-third of the volume. The remaining parts are: (II) "The Age of Nāmadeva: Democratic Mysticism"; (III) "The Age of Ekanātha: Synthetic Mysticism"; (IV) "The Age of Tukārāma: Personal Mysticism"; and (V) "The age of Rāmadāsa: Activistic Mysticism." The labels for the several periods are, most of them, aptly chosen: the predominant note with Jñāneśvara is, indeed, his Brahmanic intellectualism; with Nāmadeva, the tailor, and his disciples (a potter, a gardener, a goldsmith, an untouchable, a maid, a barber, a dancing-girl), the emancipation of the popular mind; with Tukārāma, the trader, his pathetic self-record; and with Rāmadāsa, the Brahmin, his vigorous activism. As to Ekanātha, however, we do not think that his "tendency of making compatible the love of God and the rightful performance of Duty" is nearly as prominent as his persistent endeavour, unheard of before, to throw open to the whole nation the treasure-house of Brahmanic sacred lore reserved until then to the Sanskrit-knowing aristocracy. Why not call this mysticism, which inspired a Śhivāji, and has admittedly been a powerful factor in the formation of the Marāṭha kingdom, a "nationalist mysticism"?

As part of a History of Philosophy this volume is curiously disappointing. Turning over its pages we rub our eyes and cannot find history of philosophy in it and but little of philosophy proper, until at the end of the work we are enlightened by the amazing confession: "The philosophical aspect of mysticism we have hardly any time to enter into in this volume"! This task, we are told, "shall form the subject of a forthcoming work on the 'Pathway to God.'"

This failure to produce the kind of work we were entitled to expect is a result of the unfortunate habit of not insisting, in the case of encyclopaedic works of an historical character, on the publication of the volumes in their chronological order. Only with constant reference to the preceding volumes would it have been possible to point out the progress of philosophy in Indian mysticism; those volumes, however, were not yet published and, probably, not even written, and a good deal of even their textual material has not yet become accessible in print.

The volume before us gives the *materials* on which, together with those to be given in its second part, the inquiry on the rôle of philosophy in Indian mysticism will have to be based. It gives *monographs* of the Marāṭha mystics: their biographies (with detailed discussion of the chronological data) and their views, and the latter are described in a way (viz. "by heaping similes over similes and metaphors over metaphors," p. 161, said of Jñāneśvara).

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which makes one regret that the author has not cut down this part to half of it and made use of the remaining space for doing what he could as an historian of philosophy. For, that he could have done something of this sort the book itself shows. It is quite sure, *e.g.*, and our author himself says so (p. 178), that "Jñānadeva had come definitely under the influence of the Śiva-sūtra philosophy" of Kashmir. Many works of the latter being available in excellent editions, the subject could have well been given the detailed inquiry it demands instead of merely hinting at it. The "Sphūrti-vāda" is (on p. 158) introduced as being Jñānadeva's "original contribution to philosophic thought"; but in the section devoted to it we fail to discover anything original, nor is there an attempt to show what the originality consists in. The term also is not explained (and is, moreover, missing in the copious "Index of Names and Subjects"), it being left to the reader to guess that *sphūrti* "vibration" or "breaking forth visibly," is the same as *spanda*, and, consequently, an admission, by Jñāneśvara, of this theory being not his own but of Kashmirian origin. Among the original contributions, of which there are not many, we might perhaps count Rāmadāsa's theory (not sufficiently marked out) of the four Selves, viz., of the Life-Self (= individual soul), the Śiva-Self (or personal God), the Highest Self (or world-soul), and the Spotless Self (or Absolute) (p. 386). But even this doctrine is not really original, as shown by the Pāñcarātra theory of the five so-called *prakāras*, or modes of being, of God.

But though the work has missed its object, or what should have been its object as part of a history of philosophy, it cannot for that be declared valueless. For it is the first comprehensive work on mysticism in Maharashtra. It gives a mass of materials practically arranged and much of which (as almost the whole chapter on Jñāneśvara) has so far not been available to the English-reading public. It will be specially appreciated by those who can compare its numerous quotations with their Marāṭhī originals published in the companion volumes to the present work, viz., the four "Source-books of Indian Mysticism" (obtainable for Rs. 5 only the set). An appendix in this volume serves immediate identification of each quotation with its original in the "Source-books."

F. OTTO SCHRADEP.

Neue Wege der Philosophie—Eine Einführung in die Philosophie der Gegenwart. By FRITZ HEINEMANN. (Leipzig: Queller and Meyer, 1929. Pp. xxviii + 434. Price RM. 6.20.)

It was a theory of Martineau's that the differences between the several periods of philosophical development might be explained by a curious characteristic of human thought. The speculative curiosity of men moves about, he points out, through the circle of three great objects: God, Nature, and the Soul, and is ever attempting to determine the relations subsisting between them. The human mind has, however, a tendency to place its objects in antithesis, finding them more intelligible where they shed the light of contrast upon each other. The effect of this "dualism of the intellect" has thus far been always the same; that one of the objects has either been silently absorbed into the other two, or has been left outside both, with no definite relation to either and an uncertain chance of recognition at all. Moreover, each of the three elements, the human, the cosmical, and the Divine, has in turn failed of its just rights. The Greeks engaged themselves with God and the Cosmos, and not with man as separate from these; the Christian Church was absorbed

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in the relation of God to man, and treated nature as subservient or accidental; whilst modern speculation investigates the relations of man and nature, either identifying God with the latter, or conceiving him as essentially external to both.¹

Whilst this explanation of the divergences between these historical periods is too suggestive to be summarily dismissed, it is hardly possible to accept it without qualification. The antithesis of God and the Cosmos seems particularly inapt as the differentiating mark of Greek thought, doubtless because the other pole to which man is wont to set his metaphysical objects in opposition is normally himself as the thinker. It is his own relation to the world, to God, or to his fellow-men, that has engaged his attention in every age of speculation. Hence what distinguishes modern from classical thought is less the objects it seeks to relate than its method of relating them, with the change of emphasis that this implies.

It is the specific character of the method employed by the centuries between A.D. 1600 and 1900, and the causes of its almost complete breakdown in the twentieth century, that Dr. Heinemann has described for us in the present volume. If human existence be defined, not in terms of an obsolete theory of substance, but as "a unity of forces in reciprocal action," or, from a more external point of view, as "a system of relations of being, meaning, and value" (p. 17), it will be apparent, he thinks, that what varies from one epoch to another is the centre of reference of this system. In classical thought man was a factor in the undivided, organic whole of the Cosmos; the unifying concept of mediæval civilization, on the other hand, was a God who stood in relation to the subject as his transcendent source or creator; what distinguishes the philosophical tradition started by Descartes from both these earlier standpoints is the removal of the centre of reference from without to within. Its systematizing principle is the unity of the subject itself; its procedure is not the determination of thought by the world but the determination of the world by thought. Where the immanent Logos is rejected and the transcendent Logos is denied its function, the only remaining course is to rebuild the world-order from within the subjective Logos (p. 41). Without denying the importance of the numerous counter-movements that have arisen, we may regard the principal types of philosophy from Cartesianism onwards, through Leibniz, the English empiricists, Kant, and the nineteenth-century idealists, to the positivists, Neo-Kantians, and Neo-Hegelians of the last thirty years of the nineteenth century, as but varying applications of a single principle, which treats reason as the sole vehicle of knowledge, leading to the mechanization of science, and resulting in the social realm in the rise of an industrial bourgeoisie.

In contrast to the uniformity of this historical epoch, the first thirty years of the present century are admittedly a period of crisis. And this crisis, Dr. Heinemann claims, is much more than a scientific or philosophical, or even than a cultural or spiritual crisis, it is a crisis of humanity itself. What he believes to be the way of delivery that is in process of discovery becomes clear in the course of his investigation. It is evidently his view, however, that the philosopher's task is rather to understand such a situation in its manifold historical, psychological, and sociological aspects than to furnish the solution of its problems. Hence the main object of his book is an analysis of the present crisis in thought, the chief interest of which for his English readers, as doubtless also for his German compatriots, will be his deliberate application of the method, which he has described in the chapters on Dilthey

¹ James Martineau: *Types of Ethical Theory*. Third revised edition, Oxford, 1889, Vol. I, pp. 123 f.

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and Simmel, of interpreting the world through its history. If we regard history, as these writers do, as a dynamic interrelation of forces, having each its own meaning and value, it should be possible for us, through our common humanity, to bring our many-sided experience to bear upon the events of other lives in other eras, and so "to infuse with new life the bloodless shadow of the past" (quoted from Dilthey, p. 204). To understand the present crisis we need to cast our minds backwards in this way, and to re-live the principal phases of the "subjectivism" for which the cosmic structure necessarily corresponds to the structure of mind itself, and reason is thus the medium of absolute knowledge.

We find the source of this position in Descartes' theory of an isolated consciousness as the starting-point of speculation, which can thus have access to no reality beyond its contents, form, or products. There have been three main variations upon this theme, according to whether consciousness is regarded as the mere sum of its contents, as the productive source of these, or as the source of its formal principles. As each of these positions has been reformulated in the last fifty years, and as it is naturally these later formulations in terms of recent scientific thought that have had the most direct effect upon contemporary speculation, it is to the latter, *i.e.* the fictionalism of Vaihinger as a late representation of Positivism, the Neo-Kantianism of the Marburg school (Cohen and Natorp, and less characteristically Cassirer and Nicolai Hartmann), and Italian Hegelianism (Croce and Gentile), that Dr. Heinemann devotes most attention. These schools, however, mark the close of an epoch; hence their chief interest necessarily lies in the reaction they have excited. It is therefore his later chapters describing the recent counter-movements to Subjectivism that are likely to attract most attention.

The trend which he is able to trace in all the more significant aspects of contemporary thought, in history, psychology, biology, sociology, is the trend towards *existence*, in the sense in which Kierkegaard first defined it, as a synthesis of being, value, and meaning; in other words, it is a return from the abstract rationalism and one-sided subjectivism of the Cartesian tradition in all its varying forms to a search for a more concrete reality. Within this movement we must, however, distinguish two separate stages, the second of which is only at the present time developing in the work of the author himself and a group of his contemporaries, so that it cannot as yet be viewed under the perspective of history.

The first stage is simply the inevitable reaction of *life* in its irrational aspects against abstract reason as the sole source of knowledge. The historical representative of this reaction is, of course, Nietzsche, whose war of instinct against intellect is discussed in most of its bearings. Despite its importance as a very spectacular counter-movement, however, it is but one of the many phases of the same trend towards concrete existence of which Bergson's intuitionism is a more constructive example, though even this is of less importance than the contribution of those thinkers who have invoked history as the most fruitful medium of knowledge, time being with them the basic form of existence. Of this movement Dilthey is, of course, the pioneer, though their not wholly successful efforts to relate the process of history to the Idea render the work of Troeltsch and Simmel of sufficient importance to receive separate treatment. A similar defence of the priority of the irrational is characteristic of most of the recent movements in psychology (psycho-analysis, behaviourism, characterology, etc.), which have unanimously protested against the introspectionist's exclusive attention to consciousness as the field of psychological investigation. Though the work of Max Weber is actually a defence of rational explanation, attention is drawn to his social philosophy, not as a late phase

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of nineteenth-century rationalism, but as an example of the use of the historical method in sociology, where it is his endeavour to understand the individual, not through his actual situation alone, but through the further discovery of all his social and economic potentialities.

It is not difficult to see that, for all their claim to concreteness, the counter-movements of this stage are actually as abstract, in the literal sense of that term, as the subjectivism they oppose. For, if concrete existence defies presentation through the formal constructions of reason, it is no more completely manifested in the formless and undirected flow of an irrational instinct or life-force. The truth which these writers overlooked, but which is beginning to receive notice in the second stage of the "trend towards existence," is that, though form without matter is admittedly empty, concrete existence is no mere *ὄλῃ* which, where the constructions of reason are rejected as extraneous, remains a blind and undirected stream; it is rather always and necessarily an existence with its own characteristic form. The greatest need of philosophy to-day is a foundation in a concrete anthropology, which shall present the life both of the individual and of society as an existence having an immanent structure. We find movements in this direction as early as the middle of the nineteenth century. Dr. Heinemann mentions Feuerbach, Marx, and Kierkegaard as exhibiting in their diverse ways this common tendency. Kierkegaard's refusal to accept as the essence of man an "objective thought," transferable from one human being to another, and thus destructive of the qualitative differences between them, even between man and God, seems to him particularly significant as a turning-point in speculation. The most systematic, and doubtless most lasting, contributions to this philosophy of the concrete are, however, appearing among the present generation, where the same trend is apparent in many fields. The work of the *Gestalt* school, both in psychology (Wertheimer, Köhler, Koffka) and in biology (Driesch), is of great importance here, and has the outstanding merit of having abandoned the presuppositions of the metaphysic of substance and treated man, not as a system of attributes complete in itself, but as an element in a field of forces, and thus inseparable from, and explicable only by reference to, his environment. The introduction of the phenomenological method has also proved of immense value, since it is precisely the method of explaining the existent by its immanent structure and not by superimposed principles of organization. For this reason a substantial portion of the book is devoted to an examination of the doctrines of phenomenology.

In its earlier phase, as presented in the work of Husserl, it is important to distinguish its methodological from its logico-ontological doctrine. As affording access to new aspects of the real the former represents an advance that has proved immensely fruitful in several fields, notably in psychology and psychiatry. The tendency of the latter to raise consciousness to the status of an absolute must, on the other hand, be deprecated as a reversion to the subjectivism from which this method should have afforded a final escape. Here too, however, there is a definite movement towards concreteness in the treatment of the mental act and its content as correlative factors in a phenomenon that embraces both. More important still as representative of the present situation is the work of Max Scheler, the typical "crisis philosopher," in whom the opposing strata of life and mind appear in a characteristic mixture of attraction and repulsion. Inevitably, however, he is rather a victim of the crisis than a deliverer from it. Though his attempts to establish ontologies of value and of the Divine, through the recognition of feeling as the vehicle of a stratum of being not apprehensible by intellect, are of some

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interest, the only substantial and lastingly valuable product of these investigations is, in Dr. Heinemann's view, a psychology of the emotions, the more ambitious ontological speculations being examples of the vicious metaphysics that confess acknowledgment of the absoluteness of the absolute (*i.e.* the refusal to treat it as on the level of the relative) with the actual apprehension of absolute being. Nor is the extreme dualism of his later period, according to which the blind forces of nature may be directed by a mind that is devoid of dynamic power, at all a convincing explanation of the real harmony that exists between them. Their opposition is not overcome by exhibiting them as a thesis and antithesis for which a synthesis is to be sought, but rather by showing the opposition itself to be no more than apparent (see Preface, p. xix). Of the value of the latest presentation of phenomenological theory by Martin Heidegger, Dr. Heinemann is less decided, as this was not completely formulated at the time of the publication of his own book. Whilst he criticizes its metaphysical superstructure as tending to conceal rather than to reveal the important problems at issue, he is inclined to regard Heidegger's recognition of an existence containing its structural principles within itself as one of the most important philosophical discoveries of the age. His doctrine of time as the form of all existence, and thus as the principle through which reality itself, and specifically the real nature of man as a historical existent, is to be understood, furnishes a formal anthropology which is needed as a supplement to the anthropological material yielded by the comparative studies of Dilthey, Simmel, Weber, and others, and thus reveals the internal connection of several strata of experience, *e.g.* the historical and the religious.

Now if Heidegger's view of historical existence be the true one, the development of thought through a historical period such as Dr. Heinemann has described should be self-explanatory. Whether, however, it is really possible for the philosopher of history so to identify himself with the process he describes, that his interpretation is actually history's explanation of itself, free from all taint of personal bias or subjective colouring, is a matter upon which very serious doubts may be entertained. It is questionable whether the most disinterested inquirer can ever wholly disentangle the verdict of history upon itself from the meanings read into it by a later generation with its own characteristic sympathies and desires, its zeal to direct the trend of events towards the ends it holds desirable. But, where such a doubt arises, a historical investigation of the kind here undertaken must appear as no more than a prolegomena to a systematic account of the position under the perspective of which the trend of historical development is viewed. It is greatly to be hoped, therefore, that Dr. Heinemann intends shortly to present us with his own "philosophical anthropology," some of the most important implications of which are apparent in the present work. In the meantime we are indebted to him for a very vivid and sympathetic account of the crisis in contemporary thought, as seen in the light of its historical antecedents. The book will serve the double purpose of familiarizing his English readers with the principal doctrines of several important continental schools of thought and of introducing them to a position with which they are likely to be unfamiliar, but which is beginning to exercise considerable influence upon the thought of Germany to-day.

MARY E. CLARKE.

The Return to God - a Catholic and Roman View. By the Rev. Father L. J. WALKER, S.J. (London: Arthur Barker, Ltd. Pp. 223. Price 5s. net.)

The interest of Father Walker's book lies largely in the fact that it is a contribution by a Jesuit to the literature, not, as might be expected, of

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Thomism, but of that Christian Platonism which, as Dean Inge is fond of urging, is part of the tradition of English religious thought. "Before men can return to God," Father Walker begins, "they must first believe in Him," and in these days must have reasons for their belief; and, while he does not disavow the reasons traditionally advanced by Thomism, he feels that the Platonist and Augustinian arguments are perhaps more likely to carry conviction at the present time.

He invites us to consider the significance of the various worlds to which we are introduced in dreams, in art, in mathematics, and in moral experience. No one of these worlds, he argues, exists *sub specie temporis*, but they all have being and objective reality. The object of mathematics, for instance, is not the symbols which it employs, nor any mental construct, but the invariable relations between the ideas which its symbols represent. Similarly, moral obligations are not the creation of our minds; we simply apprehend them, and, in apprehending them, recognize their binding character. All these worlds, he continues, point beyond the distress and striving of this world to the existence of a reality, the One and the Good, from which they all flow and in which they are all comprehended.

Father Walker covers much ground in little space, and always writes brightly and persuasively; and, although his book is addressed rather to the general reader than to philosophers, it would be doing less than justice to its philosophic temper not to treat it seriously and go on to criticize it by pointing out a place where its argument seems to be incomplete, and where its author seems to forsake Plato's guidance.

The difficulty is to understand what relationship there is between his objectively real worlds, or what warrant he has for advancing from a plurality of worlds, each neatly severed from its neighbour, to a unity inclusive of them all. For, if we contemplate a plurality of equally real cinematograph films of varying merit and interest, we shall never attain to grounds for believing them all to be the work of one designer unless we can detect in each one of them the working of a single principle of technique or method. No such single principle is observable in the worlds which Father Walker describes. For instance, they do not seem to be regarded by him as grades of appearance each one nearer the real, or more adequately symbolic of the real, than its predecessor. Mathematics is said to be indicative of invariability, moral ideals of goodness; but he leaves us wondering what ground there is for ascribing these qualities not merely to the worlds in which they are discovered, but to one single principle that transcends and incorporates them both. It is true that, in describing the One, he tells us that each of the worlds expresses it in different degrees, but this is jumping to his conclusion—Unity—and then letting down a ladder afterwards to help himself up to it; to use that ladder, however, could only be justified if he then went on in the light of the One to reinterpret the meaning of each of the worlds in which it is expressed. No such reinterpretation is given, and, indeed, to have given it would have involved giving an account, as Plato did, of the various ways of knowing, and, possibly, revising the assumption, apparently made throughout, that the various real worlds simply impose themselves on a passively receptive mind, like images on a photographic plate.

In the last three chapters of the book the philosopher gives place to the Catholic apologist, and philosophers who do not share Father Walker's faith may then find their interest flag; but ample compensation for this is contained in Chapter II, the longest in the book, which is a lucid, compact, and fascinating summary of religious movements of the sixth century B.C. in India, in China, amongst the people of Israel, and in Magna Graecia.

T. M. KNOX.

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Storia della Filosofia. Parte Quarta: La Filosofia Moderna. I, L'Età Cartesiana.

By GUIDO DE RUGGIERO. (Bari: Laterza & Figli. 1933. Pp. 366. Price Lire 25.)

This is the eighth volume of the author's remarkable survey of the philosophy of the Western world. It is as impressive as its predecessors, and deserves a far wider reading than it is likely to get. To have so beautiful a language as Italian as one's native medium of expression is a piece of good fortune, and to handle it so resourcefully and yet so austere as Professor de Ruggiero does is a high personal attainment; but, unfortunately, the fine result is not available for everybody. If the History were smaller I would strongly urge translation, for it is unique in its execution and, being richly suggestive, is of great educational value. Like the rest, the volume before us embodies both first-hand work on a wide range of sources and a close study of the very considerable secondary literature; one cannot wonder that three years have elapsed since the last instalment appeared. But the antiquarian scaffolding has been carefully cleared—*ars est artem celare*—the emphasis being far more on interpretation than on information, and as an interpreter the author is brilliant, with a metaphysical flair which unerringly elicits the big issues and leaves them not smothered but clarified by the supporting quotations and comments. There are summaries enough already, but of interpretations we can scarcely have too many when they come from a mind so fresh, so appreciative, and so surely critical as that of Professor de Ruggiero.

The volume begins with the dawn of the new physics, passes to Descartes and Spinoza, and concludes with the fortunes and misfortunes of Cartesianism in France and the Netherlands. The author rightly refuses to separate the new science and the new philosophy; both, he points out, are expressions of a single bias of thought, the turning away from quality to quantity and the consequent mechanism being not the result of the new researches but postulates of the method these were to follow—and a conception of a particular method is "a view of the world *in nuce*, a view implicit in the very orientation of the inquiry." The author consequently emphasizes the mechanistic strain in Descartes, Spinoza, and Malebranche. In the two latter this strain is, of course, more than counterbalanced by a dominant strain of mysticism, but in Descartes it is developed much more fully than the apparently idealistic strain; and I hoped that Professor de Ruggiero would say what his general view of the period suggests, namely, that a mechanistic account of nature was the goal towards which Descartes in his sceptical and theological preludes was laboriously hurrying—in other words, that Descartes embraced metaphysics only that he might find a warrant for siding with the new physics. But the author does show that he cannot endorse the tradition of the text-books, which makes of Descartes the father of modern idealism. Of course, Descartes happened to influence Locke, and Locke influenced Berkeley (who also came into more direct contact with Cartesianism through Malebranche), but the idealism that resulted from this line was the very one which Descartes believed he had refuted; and it is very doubtful whether the idealism of Hegel owed anything at all to Descartes.

Descartes is so well-worn a subject that it is a pleasure to find a freshly written account of him, one which owes its freshness not to any determination to be original but to sheer felicity of interpretation and expression. The general impression left is of the contrast between the clearness and distinctness which Descartes desiderated and the obscurities of his own system. Spinoza, however, is not a trite subject; the literature on him is smaller, and in the whole of it he is neither summed up nor worn threadbare. According

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to Professor de Ruggiero, he has suffered much misunderstanding through being treated overmuch as a disciple, even with the concession that he was an independent disciple, of Descartes. Far from rising to monism through first an acceptance of Descartes's definition of substance and then a recognition of the inconsistency with this of conceiving mind and matter as substances, he was a monist by racial temperament and tradition, finding in Cartesianism not a new conception of things but a new method or instrument suited to give his own antecedent vision an ordered and cogent shape, though in taking over the method he naturally took over a few other things as well. The author holds that the roots of Spinoza's monism lay in the Neoplatonic tradition of the Middle Ages and of the Renaissance, and suggests further that the doctrine of parallelism may have come from the *Fons Vitae* of Avicbron. In consequence, he stresses a dynamic conception of Spinoza's God, as a cause unfolding itself in the attributes and modes rather than as a universal exhibiting its determinations; and he notes the affinity with both the pagan and Christian Neoplatonism of Spinoza's erection of God above thought and matter, reason and will, above all determinations whatever (though he observes also that when at the end of the *Ethics* the demands of our moral and religious nature come up for consideration, terms that imply personality creep in). The most general contrast, he says, between Descartes and Spinoza is that whereas the former tried, though very unsuccessfully, to break with tradition, the latter took up the content of the past in the hope of bringing it into the light of Cartesian evidence.

The preliminary chapter on Bacon, Kepler, and Galileo, and the concluding chapter on Cartesianism in France and the Netherlands, are models of relevant and sensitive statement. The bibliographies are carefully constructed and up to date. It is interesting to observe that on Bacon there is no reference to an English monograph except Broad's recent pamphlet, the foreign works being better as well as more numerous than ours. To the works on later Cartesianism should be added the important book by Professor Pierre Brunet, *L'introduction des théories de Newton en France au XVIII^e siècle* (Paris, 1931), which treats in great detail of the resistance and accommodation of the Cartesian physics to the ideas of Newton.

T. E. JESSOP.

The New Psychology and Religious Experience. By THOMAS HYWEL HUGHES, M.A., D.Litt., D.D. (London: George Allen & Unwin Ltd. 1933. Pp. 332. Price 10s. 6d.)

This volume is a competent, interesting, and valuable contribution to a living issue (one of the most important) of to-day; its title indicates its purpose: it is a vindication of religious experience (especially the Christian) against the assault upon its validity and veracity involved in the new psychology. It is well arranged, well written, and well documented. The scrutiny of the subject is penetrating, the exposition lucid, the criticism is always courteous, and the appreciation of what is good in any of the theories criticized is generous. There are a helpful Table of Contents, a full Bibliography, and a useful Index. The Introduction indicates the problem to be discussed. The first chapter describes the Basal Assumptions of the New Psychology in its two main forms—Behaviourism and Psycho-analysis; for the rest of the volume the second necessarily receives more attention than the first, which seems to me a freak which deserves only ridicule; it is mind "debunking" itself. Chapter II faces what is really the crucial issue: Is God reality, apprehended in the religious consciousness, or a projection of the

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human mind, an objectification of what is only subjective? In Chapter III, the part assigned to the Instincts, especially that of Sex, in the Religious Life, by the New Psychology, is rejected, and religion is treated, not as an instinct, but as a sentiment. In Chapter IV, on the Religious Consciousness and Experience, criticism gives place largely to constructive exposition in disproof of the psychological theories which explain it by explaining it away. The author regards feeling as basal in the religious consciousness, and asserts the apprehension of reality in religious experience.

The discussion in Chapter V of the Consciousness of Sin, including the development of conscience, brings out the sharp antithesis of these theories to moral convictions and religious assurances. The account of Conversion given by the New Psychology is, in Chapter VI, rejected as inadequate, and especially in its exclusion of the objective factor—God. I found Chapter VII especially attractive; this deals with the content of the religious consciousness, the sense of peace, the consciousness of power, and the sense of a Divine Presence. The last chapter deals specifically with the treatment of Christianity in the New Psychology, although the previous discussion of the religious consciousness was implicitly from the distinctively Christian standpoint. This chapter includes a very generous appreciation of Jung's understanding of many features in Christianity, although his view of it as a mythology is rejected.

As one followed the author's clear and fair exposition of psychological theories, one was forced to ask: Can psychology claim to be a science, when the data are so arbitrarily manipulated, when the personal equation so offensively obtrudes itself, when such a devaluation of moral and religious values results? It is a relief and comfort to know that this New Psychology does not receive the support of many competent psychologists, who respect man's mental capacity, his moral conscience, his religious consciousness, and do not seek to reduce him to the measure of a senseless, stupid, corrupt, and superstitious brute. For one who is rooted in the Christian values most of these theories must appear as irrelevant ignorance, the blind denying the existence of colour, or the deaf of sound, "The secret of the Lord is with them that fear Him." "Spiritual things are spiritually discerned." Nevertheless, one must be grateful to an author who takes such pains to expose to human reason the false pretensions of this New Psychology to be a science, and not an irrational propaganda.

A few comments on points of divergence of judgment regarding either substance or expression may be added. I do not think it wise to seek a support for the belief in man's liberty in the principle of indeterminacy in physics (p. 84). I regret that the writer follows McDougall in the loose use of the term instinct, and thus has to raise the question whether there is a "religious instinct" (pp. 116 ff). The discussion as regards *fear* as the religious motive seems to me too abstract; surely man's reaction to the world will depend on whether it offers good or threatens ill to him (p. 136). It seems to me a mistake to describe morality as "instrumental," since moral goodness is not merely a means to an end, but an essential element in the good itself (p. 150). To describe God as "a personality" is to treat the One from whom are the many, as if He were one of the many (p. 151, cf. p. 282). Can feeling be the basal element, since it must be in relation to awareness of an object, a rudimentary intellectation? (p. 156). What is said on God's Knowledge as intuition seems to me inadequate. If the world have even *relative* reality for God, His Knowledge of events in time must involve that temporal succession has some reality for Him (p. 165). As it is uncertain whether "acquired characters" can be inherited, I am doubtful if we can give any modern meaning

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to the doctrine of original sin (p. 189). Man's distinctively human endorsement makes the dominance in him of animal appetites or impulses not merely natural, but abnormal, and that endowment should through the human environment (the social inheritance) be affected for good or ill before conscious choice begins. Consciousness of sin before it develops as "an individual experience" may in my judgment be regarded as "a social fact," as a vague uneasiness as regards a disturbed relation to others (p. 204). In regard to conversion I should not allow myself the use of such a phrase as "supernatural interference" (p. 218) or "divine interposition" (p. 233) as deistic in import. I cannot see how in any experience the emotional and conative, and not the intellectual can be primary, since emotion and conation must be directed to an object apprehended (p. 223). As far as my memory serves me, Socrates' "daemon" was a restraining and not an impelling influence (p. 262). The statement on p. 269 regarding the passage of suggestion from one mind to another does not guard itself against appearing as a revival *occasionalism*. I am not convinced that an isolation of "the effort of the will" is psychologically sound (p. 274). Does not the direction of the will depend on the concentration of the attention, the absorption of the emotions in an object? The statement about mysticism seems to be inadequate, as it does not discuss the abnormal psychic conditions of visions and voices which mystics have regarded as aids to the realization of the presence of God (p. 287). Let my last comment be one of cordial agreement with the brief reference to Christology (p. 317), as I hold with the author that the divine immanence in man does not account for the uniqueness of Christ, but we must also recognize transcendence. These comments are no depreciation of the volume, but an indication of the close scrutiny I have given to it and the keen interest which it has awakened.

ALFRED E. GARVIE.

The Quest of Reality. An Introduction to the Study of Philosophy. By the Right Rev. Monsignor WALSHE, M.A. (London: Kegan Paul, Trench, Trübner & Co. 1933. Pp. xix : 594. Price 15s.)

"A youthful aspect cannot always be recaptured by age," remarks the author; yet about *The Quest of Reality* there is a vigour and a picturesqueness which would belie the words, did not the work also attest wide reading and deep reflection. It is a picture gallery, hung with vivid portraits of various sizes, portraits at once of philosophers and philosophies, interspersed with pictures of another kind, a monument to the memory of Augustine, a map of Athens, a ferry crossing the Maeander to Miletus, the relics of St. Thomas above an altar. A third of the book is devoted to ancient philosophy, of which the author gives a lucid and critical account. Modern philosophy occupies another third. It begins with Descartes, includes all the great names, and ends with a sketch of the various forms of philosophy which have appeared in recent years, and an appreciation of their value from the author's standpoint, which is that of a Thomist. The middle portion comprises two large portraits, those of Augustine and Aquinas, and a lot of miniatures. One could wish that it had been longer, that the author had made more than a passing reference to the vigorous quest for reality carried on by Abelard, by the Chartres school, and by the Victorines of the twelfth century, that he had told us more of the standpoint of Bonaventure and the Augustinians, of the Aristotelianism of Duns Scotus, of the modifications introduced by Suarez and other Scholastic writers. He seems to recognize but two great Scholastics, St. Augustine and St. Thomas Aquinas, and from his account

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of them one would scarce gather that the innovations of Brother Thomas in the thirteenth century constituted a revolution no less significant than those of Copernicus or Kant.

The Quest of Reality is a curious and striking book, and it ends in a curious way. On the cover we are assured that the quest has not been in vain, that three important results emerge: the certainty of a large measure of philosophical principles; the recognition that Truth, Beauty, and Goodness, as manifested in created things, are due to Divine Immanence; and the reasoned conclusion that God, in His transcendent Being, is the source and origin of all perfection. The results at which the author himself arrives, however, in his last chapter, entitled "The Attainment of the Quest," are very different. Instead of discussing whether truth has emerged from his long and laborious quest, he turns with relief "from the conflicting opinions of philosophers to the 'golden wisdom' of St. Thomas." This he proceeds once again to recapitulate, but ends with a shrug of the shoulders. "The true moral of the tale," he says, "is expressed in the well-known words: 'If you continue in My word, you shall be My disciples indeed, and you shall know the truth, and the truth shall make you free.'" From St. Thomas he has turned to Augustine and Anselm. There can be no true philosophy apart from revelation. *Si non credideritis, non intelligetis*.

LESLIE J. WALKER.

The Universe and Life. By H. S. JENNINGS, Henry Walters Professor of Zoology and Director of the Zoological Laboratory, The Johns Hopkins University. (New Haven: Yale University Press. London: Humphrey Milford: Oxford University Press. 1933. Pp. 94. Price 7s. 6d. net.)

This little volume embodies the tenth series of the Terry Lectures at Yale on "Religion in the Light of Science and Philosophy." Professor H. S. Jennings, the distinguished biologist, was chosen to deliver them, and he sets out "to show what positive outlook on the world is given by the study of biological science, and how this differs, if at all, from the outlook based on physics, or from the outlook presented in some of the religions of the world." The lectures are written in an admirably lucid style and are commendably free from technical terms.

Professor Jennings begins by rejecting without hesitation the over-simplified biology of those who attend only to the outer or physical aspects of life, and he insists on including the inner or mental data as well. Life is, for him, an emergent with new qualities which could not have been foretold from a knowledge of things at the physico-chemical level. Behaviourists and others notwithstanding, the mental factor in life is not a mere epi-phenomenon. In the causation of events by living creatures it is impossible to isolate the mental from the physical, and therefore it is unscientific to conclude that the mental plays no part. As against a widespread notion that science is only possible on mechanistic assumptions, the view is taken that all that is necessary for science is "that events depend on conditions." As these conditions change with the emergence of the unpredictable, in a "Universe which is not given complete once for all" (p. 30), Science, even if omniscient with respect to the past, would have to confess ignorance with respect to the future. Has life a predetermined goal? Is it controlled by an over-ruling purpose? "So far as biological science can see, there is no indication of the previous existence of a prototype, a final goal toward which life is tending" (p. 62). Also, "every indication that might be sought of a guidance of life towards a pre-existing goal is lacking" (p. 63). The argument from contrivance to con-

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triver is dismissed as involving an infinite regress which "gets us nowhere" (p. 64). It may be pointed out, however, by way of criticism that a theistic philosophy should be taken as a whole, and that no infinite regress is involved when it postulates an eternal self-sufficient Being as the Ground of the world. Such a philosophy, moreover, it may be contended, by its acknowledgment of the non-temporal, gives a more adequate description of the universe than the doctrine of creative emergence, which Professor Jennings takes as the last word about the mystery of the cosmos.

In the third and closing chapter on "The Management of Life," morality, value in general, and human destiny are discussed. The biological basis of all values should, it is urged, be kept in mind, otherwise the subject becomes infected with unreality. Morality needs no authority outside itself—altruism, for example, has a natural basis—and moral codes should be frequently revised to meet the needs of life. Life's needs, in this philosophy, would be given a very wide range, but though Professor Jennings would include the idealist's absolute values, Beauty, Truth and Goodness, among biological values, he would think some of the conclusions as to human destiny drawn from man's enjoyment of such values unsound. Neither in this region nor elsewhere is there "evidence of the sort required for establishing the verifiable relations accepted in science that the individuals who have died still live as such in some other condition" (p. 87). To make the inference, however, from such conclusions as these that life is not worth living or that right and wrong have lost their meanings, we are told, would be unwarranted. Right is what promotes, and wrong what hinders, life. Life is good in itself, and interest in the future progress of the race can happily replace interest in one's own immortality.

Professor Jennings does not allow himself to overlook the failures of life, and for that reason his readers are more likely to think that the closing words of his book, though optimistic, are well grounded. "Life . . . is progressing in the present as it has in the past. In the future it may be expected to advance as it has done in the past—to heights that no one can predict, to which no one can set limits."

A. E. ELDER.

Ajñāna. (Calcutta Oriental Series, 26.) By G. R. MALKANI, R. DAS, and T. R. V. MURTI. (London: Luzac and Co. 1933. Pp. iii + 226. Price 10s. 6d.)

These three essays, independently written, one by each author, are apparently the outcome of discussions held at a certain Indian Institute of Philosophy. All three hold, that on the proper interpretation of 'Not-Knowing' the understanding of the Vedāntic system, *i.e.* early mediaeval Indian metaphysic, mainly depends. The essays are named respectively, Nescience (*Ajñāna*), The Theory of Ignorance in Advaitism (Monism), and again, *Ajñāna*. The essayists have a good mastery of lucid English, and show acquaintance with British philosophic classes, such as Hume and Berkeley, and with modern British thought, such as the realism of S. Alexander, but not with European classic philosophy, either ancient or modern. Allusion to any Western thought is very slight. This is not said to underrate their concentration on Indian tradition, but in order to tell the reader what he will not find. Neither will he find historical treatment in any one of the three. But then that is never a metaphysician's strong point. For him it does not much matter where and when the thinker he takes as typical lived. *E.g.*,

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page 190, "The Buddhist" is a work or a man referred to as Chitsukhi; now who, or what, or *when* was Chitsukhi? But the work will repay reading, if only to compare this negative datum of metaphysic with more positive starting-points.

C. A. F. RHYS DAVIDS.

Eastern Philosophy for Western Minds: An Approach to the Principles and Modern Practice of Yoga. By HAMISH MACLAURIN. With a Preface by Major F. YEATS-BROWN. (Boston, U.S.A.: The Stratford Co. 1933. Pp. xii + 282. Price \$2.50.)

In the two parts of this book, *The Ancient Aryan Teachings and The Practice of Yoga* (it is claimed there are three parts), I see a certain advantage in the American reader's possible complacency in Western achievement being castigated by other-world and other-time achievement, but I lay the volume aside with the truth of Pope's line made truer: "a little learning is a dangerous thing." We read much about Vedic 'writings,' Vedic 'experimenters,' Vedic 'contentions.' But never a word of exact reference to vindicate it all; never a sign of living gurus in the picture, who tell us this and that. We are wandering in a Cloud-cuckoo-town. And whereas the chief lesson of Indian thought is to show us the More that there is in the Man—the very Man, not his body or mind—the religious philosophy of the author does but give us a materialistic conception of a Man-in-the-Less. Major Yeats-Brown has some useful criticism in his preface, and, in his advocating "a feeling-realization of unity with the worlds visible and invisible," reveals implicitly a great defect in a book on "Aryan wisdom," to which the worlds invisible were as real and as near as the author makes them unreal and of no account. But that the former should endorse the materialistic picture of reincarnation, and call a tribunal after death "preposterous," when it is the most rational event, as man's "next step," that can be imagined, is a surprise.

C. A. F. RHYS DAVIDS.

Books received also:—

- J. H. BADLEY. *The Will to Fuller Life*. London: George Allen & Unwin Ltd. 1933. Pp. 282. 10s. 6d.
- J. W. FRIEND and J. FEIBLEMAN. *Science and the Spirit of Man. A New Ordering of Experience*. London: George Allen & Unwin Ltd. 1933. Pp. 336. 12s. 6d.
- VARIOUS. Ed. E. L. Schaub. *Spinoza, the Man and His Thought*. London & Chicago: The Open Court Co. 1933. Pp. vi + 61. 3s. 6d.
- VARIOUS. *Proceedings of the Aristotelian Society, 1932-33*. London: Harrison & Sons Ltd. 1933. Pp. 354. 25s.
- G. R. HEYER, M.D. (Translated E. & C. Paul). *The Organism of the Mind. An Introduction to Analytical Psychotherapy*. London: Kegan Paul, Trench, Trübner & Co. 1933. Pp. xi + 271. 15s.
- A. KORZYBSKI. *Science and Sanity. An Introduction to Non-Aristotelian Systems and General Semantics*. Lancaster, Pa., and New York: International Non-Aristotelian Library Publishing Co. 1933. Pp. xx + 798.
- C. E. PLAYNE. *Britain Holds On, 1917, 1918*. London: George Allen & Unwin Ltd. 1933. Pp. 440. 15s.

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- A. H. J. KNIGHT. *Some Aspects of the Life and Work of Nietzsche, and particularly of his connection with Greek Literature and Thought.* London: Cambridge University Press, 1933. Pp. 194. 10s. 6d.
- A. S. PRINGLE-PATTISON, LL.D., D.C.L. (Edited with Memoir by G. F. Barbour, Ph.D.). *The Balfour Lectures on Realism.* Edinburgh and London: W. Blackwood & Sons, 1933. Pp. x + 258. 7s. 6d.
- M. OAKESHOTT. *Experience and its Modes.* London: Cambridge University Press, 1933. Pp. viii + 359. 15s.
- E. SCHNEIDER. *The Aesthetics of William Hazlitt. A Study of the Philosophical Basis of His Criticism.* Philadelphia: University of Pennsylvania Press. London: Oxford University Press: Humphrey Milford, 1933. Pp. viii + 200. 8s. 6d.
- W. W. TARN. *Alexander the Great and the Unity of Mankind.* (Raleigh Lecture 1933.) London: Humphrey Milford, 1933. Pp. 46. 2s. 6d.
- S. DASGUPTA, Ph.D. *Indian Idealism.* London: Cambridge University Press, 1933. Pp. xxiii + 206. 10s. 6d.
- C. A. MACE. *The Principles of Logic. An Introductory Survey.* London: Longmans, Green & Co. 1933. Pp. xiii + 388. 12s. 6d.
- J. C. FLUGEL. *A Hundred Years of Psychology.* London: Duckworth & Co. 1933. Pp. 384. 15s.
- F. G. CROOKSHANK, M.D., F.R.C.P. *Individual Psychology and Nietzsche.* London: The C. W. Daniel Co. 1933. Pp. 76. 2s. 6d.
- C. R. MORRIS, M.A. *Idealistic Logic. A Study of its Aim, Method, and Achievement.* London: Macmillan & Co. 1933. Pp. ix + 338. 12s. 6d.
- S. ALEXANDER, O.M., Litt.D., F.B.A. *Beauty and Other Forms of Value.* London: Macmillan & Co. 1933. Pp. x + 305. 10s. 6d.
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- W. GALT, M.A. *Phylogenesis. A Study in the Group or Phyletic Method of Behaviour-Analysis.* (Preface by T. Burrow, M.D.) London: Kegan Paul, Trench, Trübner & Co. 1933. Pp. 151. 2s. 6d.
- COMMANDER B. T. COOTE. *Scheme of National Training for Leadership in Leisure Activity.* (Foreword by L. P. Jacks, D.D., LL.D., D.Litt.) Published by the author at Send, Surrey. Pp. 6. 6d.
- C. RITTER. (Translated A. Alles.) *The Essence of Plato's Philosophy.* London: George Allen & Unwin Ltd. 1933. Pp. 413. 10s.
- C. E. M. JOAD. *Counter Attack in the East.* London: George Allen & Unwin Ltd. 1933. Pp. 260. 7s. 6d.
- H. DRIESCH. (Translated T. Besterman.) *Psychical Research.* Foreword by Sir O. Lodge. London: G. Bell & Sons, 1933. Pp. xvi + 176. 5s.
- S. M. SLINCHELD, Ph.D. *Speech Disorders. A Psychological Study of the Various Defects of Speech.* (International Library of Psychology, Philosophy, and Scientific Method.) London: Kegan Paul, Trench, Trübner & Co. 1933. Pp. xii + 341. 15s.
- C. LLOYD MORGAN, D.Sc., LL.D., F.R.S. *The Emergence of Novelty.* London: Williams & Norgate Ltd. 1933. Pp. 207. 7s. 6d.
- E. E. KEILETT. *A Short History of Religions.* London: Victor Gollancz Ltd. 1933. Pp. 607. 7s. 6d.
- A. G. GIBSON. *The Physician's Art. An Attempt to Expand John Locke's Fragment 'De Arte Medica.'* Oxford at the Clarendon Press: Humphrey Milford, 1933. Pp. 237. 7s. 6d.
- R. V. FELDMAN, M.A. *The Concept of Self-Respect, and its Significance for Jewish Theology.* London: E. Goldston Ltd. 1933. Pp. 10.

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- L. J. A. MERCIER. *The Challenge of Humanism*. New York and London: Oxford University Press: Humphrey Milford. 1933. Pp. vi + 288. 10s. 6d.
- R. G. COLLINGWOOD. *An Essay on Philosophical Method*. Oxford at the Clarendon Press. London: Humphrey Milford. 1933. Pp. xii + 226. 10s.
- M. BLACK. *The Nature of Mathematics. A Critical Survey*. (International Library of Psychology and Philosophy.) London: Kegan Paul, Trench, Trübner & Co. 1933. Pp. xiv + 219. 10s. 6d.
- W. BURRIDGE, D.M., M.A. (Foreword by Sir L. Hill.) *A New Physiological Psychology*. London: Edward Arnold & Co. 1933. Pp. vi + 158. 7s. 6d.
- G. P. CONGER, Ph.D. *The Horizons of Thought. A Study in the Dualities of Thinking*. Princeton: Princeton University Press. London: Oxford University Press: Humphrey Milford. 1933. Pp. x + 367. \$5; 22s. 6d.
- S. RADHAKRISHNAN. *East and West in Religion*. London: George Allen & Unwin Ltd. 1933. Pp. 146. 4s. 6d.
- A. D. NOCK. *Conversion: The Old and New in Religion from Alexander the Great to Augustine of Hippo*. London: Oxford at the Clarendon Press: Humphrey Milford. 1933. Pp. xii + 309. 15s.
- UGO SPIRITO. *Scienza e Filosofia*. Firenze: G. C. Sansoni. 1933. Pp. 155. L.12.
- GALVANO DELLA VOLPE. *La Filosofia dell'esperienza di Davide Hume*. Firenze: G. C. Sansoni. 1933. Pp. ix + 191. L.30.
- G. F. BARIÉ. *La Spiritualità dell'essere e Leibniz*. Padova: Dott. Antonio Milani. 1933. Pp. vi + 553. L.57.
- E. GRASSI. *Dell'apparire e dell'essere*. Firenze: La Nuova Italia. 1933. Pp. 96. L.6.
- G. GALLI. *Saggio sulla Dialettica della Realtà Spirituale*. 1. *I problemi fondamentali*. Roma: Società Anonima Editrice Dante Alighieri. 1933. Pp. viii + 277. L.25.
- U. A. PADOVANI. *Arturo Schopenhauer. L'Ambiente, La Vita, Le Opere*. Milano: Società Editrice Vita e Pensiero. 1934. Pp. x + 214. Lire quindici.
- VARIOUS. *Spinoza. Nel Terzo Centenario della sua Nascita*. Milano: Società Editrice Vita e Pensiero. 1934. Pp. v + 210. Lire dodici.
- Dictionnaire de Spiritualité. Ascétique et Mystique. Doctrine et Histoire*. Fascicule 11. Allemande (Spiritualité)—Anglaise (Spiritualité). Publié sous la direction de Marcel Viller S. J. Paris: Gabriel Beauchesne et Fils. 1933. Pp. 322-639. 20 frs.
- R. DÉJEAN, D. ès L. *L'émotion*. Paris: Librairie Félix Alcan. 1933. Pp. vii + 261. 35 frs.
- R. DÉJEAN, D. ès L. *La Perception Visuelle: Étude Psychologique de la Distance: les Conditions Objectives*. Paris: Librairie Félix Alcan. 1920. Pp. 168.
- Œuvres de Jules Lachelier*. Paris: Librairie Félix Alcan. 1933. Tome 1. Pp. xlv + 219. Tome 2. Pp. 224. Les 2 tomes ensemble 80 frs.
- VARIOUS. *Septimana Spinozana. Acta Conventus Oecumenici in memoriam Benedicti de Spinoza diei natalis trecentessimæ Hugae Comitissæ habitæ*. The Hague: Martinus Nijhoff. 1933. Pp. xii + 321. 8 guilders (Buckram 9.50 guilders).

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INSTITUTE NOTES

LENT TERM begins on January 9th and ends on March 22nd. The following courses of lectures have been arranged for the Lent Term of the Session 1933-34:—

"THE PHILOSOPHY OF RELIGION," a course of six weekly lectures by O. S. Franks, M.A. (Fellow and Praelector of The Queen's College, Oxford), on Fridays at 5.45 p.m., at University Hall, 14 Gordon Square, W.C.1, beginning February 2nd. Fee for the course, 12s. 6d. Members free.

"SOVEREIGNTY, FREEDOM, AND THE STATE," a course of six weekly lectures by W. A. Pickard-Cambridge, M.A. (of Worcester College, Oxford), on Tuesdays at 5.45 p.m., at University Hall, 14 Gordon Square, W.C.1, beginning January 23rd. Fee for the course, 12s. 6d. Members free.

The Evening Meetings for the Lent Term will be held at University College, Gower Street, W.C.1, at 8.15 p.m., on the following dates:—

January 16th: "Traditional Morality and Modern Life." Professor W. G. de Burgh.

February 13th: "Determinism, Indeterminism, and Freedom." C. D. Broad, M.A., Litt.D.

March 13th: "Science, Philosophy, and Religion." The Dean of St. Paul's.

NOTICE CONCERNING THE PUBLICATION OF A NEW JOURNAL ANALYSIS

It is proposed to publish for the first time in November 1933 and three times more in the course of a year, a new philosophical journal under the title of ANALYSIS. The Journal will consist, as a rule, of very short contributions, each so far as possible confined to a single point, in which philosophical questions will be discussed from a logical or analytical point of view. The journal will be edited by Mr. A. E. Duncan-Jones, in co-operation with

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Professor L. Susan Stebbing, Mr. C. A. Mace, and Mr. G. Ryle; these persons were chosen as a committee by a larger group of people interested in the project of such a journal. The proposal for such a journal also has the support of Professor R. I. Aaron, Mr. R. B. Braithwaite, Professor C. D. Broad, Professor G. Dawes Hicks, Professor A. J. Dorward, Mr. A. C. Ewing, Professor G. C. Field, Professor A. E. Heath, Mr. C. E. M. Joad, Professor J. Laird, Professor G. E. Moore, Mr. H. H. Price, Mr. W. D. Ross, Professor L. J. Russell, Professor G. F. Stout.

The editor and committee will aim at conducting ANALYSIS in such a way as to illustrate subjects of current philosophical interest, and to furnish philosophers in different places with a means of communicating their conclusions and reflections to one another. Discussion will be encouraged; and the delay between submission of contributions and publication of accepted matter will be as short as possible. It is intended sometimes to publish, in whole or in part, papers which have been read before philosophical societies in the universities, and which have aroused special interest.

The price of each issue of ANALYSIS will be One Shilling, post free to those subscribing for the first four numbers. It will be published by Basil Blackwell, Broad Street, Oxford.

OBJECTS OF THE INSTITUTE

The British Institute of Philosophy exists to bring leading exponents of various branches of Philosophy into direct contact with the general public, with the purpose of satisfying a need felt by many men and women in every walk of life for greater clearness and comprehensiveness of vision in human affairs.

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Further information and forms of application for membership may be had on application to the Director of Studies, University Hall, 14 Gordon Square, London, W.C. 1.

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I bequeath to THE BRITISH INSTITUTE OF PHILOSOPHY the sum of free of duty, to be applied to the purposes of that Institute, and I declare that the receipt of the Honorary Secretary, or other proper officer for the time being of that Institute, shall be a sufficient discharge for the same.

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THE JOURNAL OF THE BRITISH INSTITUTE OF PHILOSOPHY

VOL. IX No. 34.

APRIL 1934

EDITORIAL

FROM the days of Thales it has been a common taunt against philosophy that it is a form of star-gazing without relation to earthly things. Yet it would be strange if the study which Plato defined as "the contemplation of all time and existence" had nothing to say of that portion of time and existence that is passing before our eyes. As a matter of fact the revolutionary changes that are going on and taking different forms about us are each proclaimed in the name of a philosophy of life—a theory of what makes life worth living, and of the means to attain it. If, moreover, the main issue that is being fought out in the politics of nations at the present moment is that of democracy *versus* one or other form of dictatorship, the relation between it and the main issue of philosophy leaps to the eyes.

From the days when Parmenides declared that all things are one and the heart of the world at peace, Heraclitus that things are many and that war is the father of them all, the problem of philosophy has been to see how these two elements in things can be united, how the unity and order of the whole can be made compatible with the freedom of the parts, permanence and stability with the freshness of new creation. Have unity and peace their principle in the depths of human life itself because it partakes of the wider harmonies of Nature at large whose child it is? Or have they for ever to be enforced from without? There were those who saw in the Great War just the struggle between these two principles. On the one hand was a new Heracliteanism whose chief prophet was Nietzsche. Pitted against it was a new Parmenideanism of an innate

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reasonableness in men strong enough in the end to permeate and take the sting out of their differences: all that was needed was that the world should be free from the menace of force in order to give reason scope to operate. On the one hand, as Lord Sankey put it the other day, belief in *one* man (or one class), on the other hand, belief in *man*. What has changed all this and clouded this great hope?

It would take more than a few editorial paragraphs to tell the whole story, if it could ever be told at all. But one or two things stand clearly out. What has been called "the art of living together," as the highest and more difficult of all the arts, requires, as they do, long preparation. It is the child of a long tradition and of self-discipline in peoples. It cannot be acquired by any one at a moment's notice. In the second place, for a century now the question has been no longer merely a political one. Men have found that political freedom is bound up with economic. Besides the domination by individuals or classes, there was the domination by industrial circumstances and by the power that control of them gives. Yet this too might yield to reason; and the turn of the century seemed to open a way of extending the reign of reason and conscience over the abuses of industry by the establishment of social services and safeguards against the appeal to naked force. Into this prospect of orderly progress broke the War. One might have thought that it would have taught on a large scale the futility of force. So to some extent it did. It awakened a new sense of the solidarity of mankind and of reason as the only way. Unfortunately the lesson was little more than skin deep. Force was relied upon for the maintenance of peace. The belief in it was scotched but not killed. The War itself had even accustomed men to the idea of it as a means of getting their ends, and when the political and economic hopes the War had stimulated were delayed the idea recurred.

It is unprofitable to ask Who began it? Whoever did forgot that force begets force, and can in the end beget nothing else, and now the appeal to it is spreading like a conflagration from nation to nation on the Continent. Whether the flames will be allowed to leap the Channel depends on the wisdom and firmness of our Government. Meantime philosophers may see in these revolutions something that goes far deeper than a conflict between parties. It is the conflict which Whitehead has described in his great book *Adventures of Ideas*, as that between Force and Persuasion. If, as he says, "The creation of the world, that is to say the world of civilized order, is the victory of persuasion over force," then it is no less than the

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existence of that world that is at stake. Are what the same writer calls the "gentler modes of human relation" and the "inherent persuasiveness of ideas" *alias* "the divine persuasion," which religion calls Grace, to be allowed to continue their creative work, or are we to be doomed to the stagnancy and stale repetition which is all that a dictated culture can offer to our afflicted hearts? Let us not deceive ourselves by specious arguments which strive to make the worse appear the better cause. The truth that the recurrence of force, however unavoidable, is the disclosure of the failure of civilization, confronts us in its austere simplicity and shatters all such sophistries.

THE PRESENT NEED OF A PHILOSOPHY

(LETTER TO THE EDITOR FROM SIR HERBERT SAMUEL,

President of the Institute)

MY DEAR EDITOR,

You have suggested that the *Journal* of the Institute might render a useful service if it could become a forum of discussion on living issues, and you have done me the honour to invite me to open a correspondence which would have that aim. But I make no pretence to be a professional philosopher; I am only, as George Moore puts it, "prone to philosophy"; and if I accept your invitation, it is less with the hope of making any positive contribution of my own, than with the desire of urging upon philosophers of authority, on behalf of the ordinary man, the need of an effort more effective than hitherto, to give direction in these difficult times to a troubled world.

We are experiencing now the results of the freedom of thought which has been established during the last two or three centuries. The old ontology, the old ethics, and the old social order, based upon systems of theology that were generally accepted, are crumbling under the influence of new ideas inspired by the discoveries of science. Urgent practical questions—of personal and social morality, of economic organization, of international relationship—press upon the peoples, but the leaders of thought give little guidance for their solution. This generation is dissatisfied, anxious, apprehensive. It feels itself as in a ship, launched on an unknown sea, without navigator, chart, or compass. Since the old theologies cannot meet the new problems, and since science cannot claim to deal with the larger issues, men are asking what philosophy has to say to the present age.

What indeed has it to say? When I am asked by some young man or woman to suggest one or two books which will convey the message of philosophy to these times, what books are there that I should recommend?

There is no doubt that the ordinary man is repelled from philosophy by its incessant discussion of epistemology. Common sense declares that the objective world is real, as real "in its own right" as, for example, the existence of the planet Neptune before anyone had discovered it; that our minds and their capacity to perceive the objective world are real also; that the media through which the perceptions are invoked are real as well; and that our ideas are the product of

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the three. Is it impossible that that should be accepted as a working basis, and that we should then pass on to the things that are urgent?

Books of philosophy detain us with lengthy and subtle discussions on the nature of "the Good," on the problem of "Evil," on the proper understanding of conceptions such, for example, as "Colour." But the ordinary man is beginning to suspect that the philosopher is obsessed by generalizations of his own creation, that represent nothing actual or existent.

Take "Colour" for example. The physicist has discovered that various groups of atoms have the capacity of absorbing rays of light of certain wave-lengths which happen to fall upon them and of reflecting rays of other wave-lengths. Those groups of atoms which constitute, let us say, the surface of a table may reflect a set of rays of one of these wave-lengths so that it passes through the retina of my eye to my brain; they may be of that wave-length which produces there a sensation which I am accustomed to call seeing the colour yellow; when another set of rays of a different wave-length impinges upon the eye, I say that I see the colour green. Consequently the table is said to be yellow or green as the case may be. Human beings generalize from a number of such incidents and say that there is such a thing in the universe as "Colour." We then begin to formulate a series of philosophic problems about "Colour," and are disappointed to find that they never lead to any clear and agreed conclusion. May it not be that no conclusion is possible, and for the reason that we are trying to start from a point which is imaginary to reach a non-existent goal?

So also with "Evil" or "the Good." There are things, thoughts, or deeds which, for reasons of our own that can be explained, we describe as "evils," and others which we describe as "goods"; and it may be convenient to classify them into groups, and finally to bring the groups together into comprehensive units, and to call them "Evil" or "the Good." But such generalizations are only what Vaihinger termed "fictional abstractions." They may be useful for purposes of discussion; but philosophy, I venture to suggest, has lost its influence upon the world largely because it has persisted in treating them as realities. "Values," says Alexander, "are human inventions." May it not be largely for the reason that the ordinary man recognizes that that is so, while the philosopher would have him treat these "fictional abstractions" as fundamentally important, that there is the present divorce between philosophy and life?

It will not be disputed that one of the greatest gifts, perhaps the greatest, that science has made to philosophy in the modern age is the establishment of Evolution as the key to one part of the cosmic mystery. So far as it relates to human development, such evolution had not been self-conscious; it had been largely the outcome of what

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Whitehead calls "senseless agencies." But now philosophy, basing itself on science, may bring us into an era of Conscious Evolution. Cannot the philosophers give to a generation that is intellectually starved some sustenance drawn from that conception, leaving epistemology, at all events for the time being, in the background; relating itself directly and deliberately to the needs of life; seeking to answer the anxious questionings of the individual, of the society, of all mankind?

Yours faithfully,

HERBERT SAMUEL.

February 26, 1934.

THE LEADERSHIP OF PHILOSOPHY¹

HILDA D. OAKELEY, M.A., D.LIT.

THE positions that I would support in regard to the question whether philosophy has any relation to practice are as follows. In the first place, there are certain problems of modern civilization, and those amongst the most crucial, with which philosophy alone can deal. In the second place, in spite of appearances to the contrary, the present age will not be deaf to the voice of philosophy, if it can speak with sufficient clearness and power to secure a hearing. The problems to which I refer do not belong to the sphere of science, in the strict modern sense. Science is triumphant in its own sphere, but it is not concerned primarily with the values of human existence, or the activity of the mind by which they are discovered, pursued, enjoyed. But it is in respect to the values, the ideas we have inherited from Greece and Palestine, the conception of the future of our civilization, or whether it has any future, that we are in greatest confusion to-day. This confusion can be dispelled neither by contemplating the unparalleled additions to knowledge concerning the nature of things, which we owe to science, nor the astounding transformations in the conditions and forms of our life, which the application of new knowledge is bringing about. So far as can be discovered in history, no closely similar situation has previously occurred. Crises having certain analogous aspects have no doubt existed. Such a crisis there may have been—in miniature, though incomparably important for subsequent history—in the Athens of the late fifth and early fourth centuries B.C. Its importance was largely due to the fact that a supreme philosophic genius was there to point to it, and to the function which philosophy was called upon to perform. It must be admitted that from an immediately practical standpoint Plato failed. It might possibly be argued that as regards the application of his teaching to his own day he worked in consciousness of failure. He knew—as might be maintained—success to be impossible in his attempt to realize his ideal of philosophic government at Syracuse, in any case on his last visit. Only his conviction that it was the proper business of philosophy to show a remedy for the ills and wrongs of men and states induced him, when over sixty, to leave the Academy and the free and serene

¹ This article contains a line of thought presented in a paper given to the Manchester University Ethical Society, December 5, 1933, and entitled "The Leadership of Philosophy," but it has been recast.

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pursuit of truth and wisdom for the storms and discomforts of a misgoverned city. And, in spite of the unrivalled persuasiveness of his language, was there not something of the spirit of failure, in his exposition in the *Republic*, of the way to reform the state? Even, however, if Plato was not convinced of the unpracticability of the pattern of the ideal *polis*, has not history wholly rejected it, whether with the ridicule of students, Sophists, and mob that Glaucon anticipated, the melancholy resignation of the Emperor-philosopher Marcus Aurelius, or the tragic blindness of the actual course of events for over two thousand years? For I venture to disagree with the Dean of St. Paul's suggestion of a similarity between Plato's *Republic* and any modern theory or practice of dictatorship.

The view, nevertheless, that the philosopher, though spectator of all time and all existence, is also particularly concerned with his own age, to which Plato's life, teaching, and constant criticism of tendencies of the day undoubtedly testify, seems to be true. We cannot be content with the idea of philosophy as *only* arising at the close of an age—the owl of Minerva which, in Hegel's saying, appears in the twilight, when the shapes of life have grown old and cold. We might ask, What has the owl been doing in the daylight? Has it been asleep, and would this state qualify it for the analysis of that which has vanished with the day? The chief tendencies of what Professor Hartmann terms in his last book, *The Problem of Spiritual Being*,¹ the "Objective Mind" of a people or an age, cannot be known in all their actuality except by those amongst whom they prevail. Hartmann refers to the chief provinces of objective Mind as the following: Language, production, technique, the existing moral customs, recognized law, predominant valuations, prevailing morals, traditional form of education and culture, ruling type of sentiment, prevalent tone determining taste, tendencies of art and of artistic understanding, the position of knowledge and science, ruling world outlook in every form, myth, religion, philosophy. "These provinces of content," he adds, "are not only incomparable" (or incommensurable) "but highly unequal in value. . . . Also at different times we have the domination of one or the other, and the subordination of the rest." He conceives Objective Mind as historical in nature, in a sense which renders his conception different from that of Hegel. Essential to it is that as living mind it is in a state of continual change. It cannot outlast its time. Only "objectified mind," including the objects of art, literature, law, science, moral concepts, is in some respects and degrees super-temporal. I refer to this conception not to examine or criticize it, but because as a catalogue of the domains of objective mind it gives a fairly comprehensive summary of those contents and characters of an age

¹ *Das Problem des geistigen Seins.*

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which must be interpreted by contemporaneous philosophy if the interpretation is to have value for historic development, or even to be truly understood by posterity. For whether or not we find their source in "objective mind," we may agree with Professor Hartmann that in their inmost nature they do not outlive their time. Also there are qualities and tendencies, taken for granted as self-evident by the majority of those living in their midst, which only the philosophic mind can discern as not self-evident, except under conditions relative to the age.

Plato's view, then, of the necessity of philosophy to the sanity of the world in any period appears still to hold good, however little it has been acknowledged or realized in history. The purpose of this article, however, is not to attempt any sounding of the depth of his meaning, in the thesis that cities would never cease from ills until they submitted to the rule of philosophy. It is possible, or even probable, that he looked far beyond the creation of the perfect Greek community which must be assured in security even against other Greeks and is charged with no mission to the world. It is not the constructive but the critical line of his thought on which I propose very briefly to dwell, the significance of those hints he gives in regard to the profound critical work which philosophy must undertake, whether or not construction is yet possible. In the terrible indictments of Sophistry which occur in the *Dialogues* we may see the denunciation of a certain state of mind which he found to be very prevalent. This is characterized by loss of the sense of value and reality in life. In argument it is illustrated by preference for half-truths and the specious type of ratiocination which plays with high abstractions in those provinces in which the concrete grasp of things and events is most demanded. These are maladies of the mind which are found in all ages of civilization. It may be that they appear in most insidious forms at times when the efforts of man appear to be directed with greatest determination to the use of reason in the control of the modes of living and of human intercourse. Plato's criticisms apply to Sophistry, conscious and unconscious, wherever it occurs. The "Sophist" in the Dialogue with that title is always escaping the efforts of the "Eleatic Stranger" to define his nature. He hides himself in "Non-being." After discussing the various kinds of imitative arts in which the imitation is taken for the reality, the Stranger speaks of an imitative art of reasoning. "Is it not possible to enthral the hearts of young men by words poured through their ears, when they are still at a distance from the truth of facts, by exhibiting to them fictitious arguments and making them think that they are true, and that the speaker is the wisest of men in all ages?"¹ In this Dialogue, as elsewhere, Plato insists on the principle

¹ *The Sophist*, 234. Jowett's translation.

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that the chief disease of error is that which has its source in involuntary or unconscious ignorance. But it is in the *Republic* that he pierces to this state of mind, as with the sharpness of a surgeon's knife. It is due to the "Lie in the Soul." This concept is introduced in connection with the criticism of the poet for representing people as appearing in different characters; above all, for suggesting that the gods will either change themselves, or cause us to believe that they change, and go about in various forms. "That lie which is lie in very truth (if I may so speak)," says Socrates, "is hateful to both gods and men. To lie with the highest part of himself, and in regard to the highest matters, no one willingly would do. . . . What I mean is that to lie in the soul concerning realities, and there to be ignorant and to cherish falsehood, all would most avoid and abhor."¹

This passage, which expresses something that is fundamental in Plato's philosophy, seems to make clear that his conception of the meaning of truth went beyond that which we endeavour to make precise in our efforts to determine its nature in theory of knowledge. It is inseparable from an interpretation of the significance of human existence as consisting in the contact of the individual with the real sources of his being. Misunderstanding in regard to those parts of experience in which the essential self is less implicated is not so fatal. It may more easily be removed. It does not affect that part of his being which, underlying all his experience, can only with the greatest difficulty suffer a complete change. This it is which, constituting (as we may perhaps interpret) personal identity, can only escape from the false view of life, which is the worst evil and error, by the type of process described allegorically in the Myth of the Den, when the individual is brought out of the den and turned to the light, thus leaving behind illusions and unrealities, and entering a different world.²

Following the indications which are given by Plato of the method of philosophic criticism of an age in its own present time, we need not necessarily assume that either in his time and society, or in any other on which the searchlight of such criticism is cast, there was or is present a larger measure of Sophistry, a more incurable falsity in the soul, more widespread illusion than in other periods. The Prophet and Idealist will discern these phenomena in any society. The Pharisees of Jerusalem and the Sophists of Athens would have been found in other times and cities by the great Teachers who made them to be universal types. The increasing self-consciousness, however, which is characteristic of a civilization which has had a long and turbulent history, alike in the practical sphere and the sphere of mind, may make it less difficult for

¹ *Republic*, II. 382.

² *Republic*, VII.

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reflection to-day, using the glasses which Plato lends, to realize some of the powerful illusions of the times, and ask for that further criticism which may help towards their exorcism. I would take as a single illustration the idea which seems widely prevalent that by some necessity, against their will, men will be driven to destroy their own civilization. This spectre stalks through much popular literature, and affects, perhaps unconsciously, many who would not admit it as a reasoned belief, or even a sufficiently caused foreboding. It appears to result from influences mainly due to great illusions. Professor Whitehead, in his *Science and the Modern World*, refers to a "radical inconsistency at the basis of modern thought . . . which accounts for much that is half-hearted and wavering in our civilization." "The enterprises produced by the individualistic energy of the European peoples presuppose physical action directed to final causes. But the science which is employed in their development is based on a philosophy which asserts that physical causation is supreme, and which disjoins the physical cause from the final end. It is not popular to dwell on the absolute contradiction here involved."¹ Sir James Jeans has recently said that since Professor Whitehead made this observation (in 1926) the contradiction has been removed, since science has given up determinism. But it seems very doubtful whether the undermining of the "mechanistic" view in the work of some modern physicists is in fact a contribution to the solution of the ethical question. Whatever view, however, we may take in regard to the forms in which the free-will problem appears in relation to the changing background of science, the purposive form will continue to characterize practical life. It is inescapable, because the self is an active creative principle. The contradiction indicated by Professor Whitehead is injurious to clear thinking, or, to use his words, "enfeebles" it, "by reason of the inconsistency lurking in the background," but it cannot, unless in abnormal cases, hamper action. There is an analogous contradiction in which lies, I think, a more insidious danger to the vigour of action, because it occurs wholly within the directly practical field of conduct. I refer to the combination of assumptions of moral freedom with the implication of historic necessity. We may be ethical determinists, but it is hardly possible for this creed to affect in any essentials our course of action. The ethical determinists do not refrain from the exercise of creative gifts in art or adventure. They may call upon theory to explain how such acts are, nevertheless, necessitated, but their works and deeds in form and spirit reveal that man is, as Aristotle says, a principle of action. Yet from the beginning of recorded history a certain fatalism has pervaded man's attitude in respect to the possibility of important changes

¹ *Science and the Modern World*, Chapter V.

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in the tendencies and doings of men when acting together as crowds, nations, peoples, and the difficulty of maintaining respect for the great values of life when individuals are merged in such groups, and in rivalry with each other. In the famous reflections of Thucydides on revolutions,¹ it is said that the terrible calamities which war brought upon the Greek cities are such as "always will be while human nature remains the same." History up to our own day testifies to the truth of his picture of the effects of revolution. Also we feel as we read that, in the judgment of Thucydides, human nature *will* remain the same. This may be termed a belief in historic necessity. The contradiction to which I would call attention exists when this creed is held, whether clearly or obscurely, by individuals whose activities and mode of life testify to the assumption of practical freedom, whether or not they have thought out a philosophy which entails this principle.

Now, however deep our impression may be as we turn over the pages of history or of our daily newspapers, that obscure forces whose workings seem quite incalculable play a formidable part in the historic process, whether we speak with some historians of contingency and chance, or with Professor Whitehead of "senseless agencies,"² it is generally agreed that the energy or creative activity of human individuals is the most important factor. Yet, as already noted, there seems to exist at least a deep-seated doubt whether this creative energy can be consciously exercised by peoples in the mass or humanity as a whole, if not a conviction that this is impossible. A voluntary advance to a higher level of life would accordingly be inconceivable, except as an individual effort, or, if made by a community of like-minded persons, as enduring but for a limited time. The more permanent of such advances, it might be pointed out, have, on the whole, taken place unconsciously, and of none can it yet be said that they *are* permanent. The fatalism of which I have spoken accepts this by implication as inherent in the process of events, a kind of historic law, and inescapable. The sources of this tendency to believe in historic necessity are not those of ordinary scientific determinism, and it may be questioned whether if the latter could be removed this would affect the former. Scientific determinism, as I should maintain, is not applicable to history, because history in its essential truth is concerned with the individual, and scientific determinism belongs to the generalizing, categorial function of our understanding. It is valid, on the whole, for large-scale events in nature, the elements of which the laws hold good being the closely similar processes of the individual events concerned. In history such uniformities may be found roughly or in general to prevail when the subject is treated as a science dealing

¹ Book III, 82.

² *Adventures of Ideas*, Part I, Chapter I.

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with historic categories, nations, civilizations, economic society, etc. These uniformities are, however, of a highly empirical character, because the real subjects of history, individual selves and deeds, may irrupt, as if were, in unforeseen ways into the scheme, and the similarities on which the law was based in this respect disappear.

What is signified, then, by historic necessity is that there can be no "creative advance" in history. This type of fatalism or necessitarianism may be characterized as one of the great illusions which is, in Plato's language, a lapse into non-being. Or, if combined, consciously or unconsciously, with a belief in moral freedom, it reveals a contradiction at the roots of our practical attitude, a contradiction, moreover, which enfeebles not only thought but practice. We meet with it in the sense of despair in regard to the improvement of international relations, the tendency to discover in present conditions signs of the decay of modern civilization, to seek out analogies between the later state of the Roman Empire and the state of leading modern peoples.

I would suggest that amongst the grounds for the failure of belief in historic liberty is the peculiarity of our experience of the passage of time. The past seems to have a certain kind of being or existence,¹ the future to be nothing except for imagination. The past exists as unalterable for knowledge or for action. It is irrevocable, irretrievable. Consciousness of the full significance of this fact is one of the chief roots of ethics, as leading to remorse and the perception of moral obligation. In reflection on history, and the actual process of past events, continued by the imaged series of the future, we are deeply conscious of this irretrievability. Also, in accordance with principles of our understanding in the attempt to complete the past process for knowledge and get beyond the irrational factor in the temporal series, by forming the concept of history as a whole, we incline to assimilate the future in its broad characteristics to the past. In this procedure the irrevocability of the past tends to be transformed into the necessity of the whole course of history, the fact that we, the observers, are situated midway between past and future being irrelevant. This concept of the necessary character of the process of events seems to approach in meaning the Greek "Ananke," or fatal necessity, a notion deeply charged with the quality of Greek genius in the dramatic interpretation of human life. The more philosophical method, however, is not to carry the necessity of the past from the standpoint of our present into the future, but to project our essential consciousness of present free energy into every stage of past history as always *possible* or potential. Our predecessors were free in their present, and their history was

¹ Cf. *Scientific Thought*, C. D. Broad, Part I, Chapter II. *The Mind and its Place in Nature*, Chapter V.

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not in its dynamic course necessary, as the same history is now necessary in its static form for knowledge. To realize this is to be conscious of a heightening of free energy for the action of our own present. Our position in the series between past and future is not then irrelevant. The principle of freedom in relation to history demands a more positive characterization than has been given to that concept of moral freedom over which ethical analysis has always been in conflict. Professor N. Hartmann, in his book on freedom, asserts that if history shows in many respects retrogression, "historical experience cannot be decisive. The creative element in man is necessarily in opposition to it."¹

History cannot decide. With this we may certainly agree. But the voice of history must be heard, since we are in its midst, and in our own nature largely constituted by history. I should maintain that, rationally contemplated, history need not lead to a conclusion of despair. It presents a tragic character because the nature of man, whose activity as thinker and doer has been the instrument of bringing value into history, seemed to promise so much more than has been achieved. This would hold whether we regard personality as creative in the sphere of value, or as "carrier" (or bearer), to use the term chosen by some modern thinkers, that is, as human means of conveying something of the eternal values into the temporal process.

"Why," asks Professor Rostovtzeff, in his work on Rome; "did such a powerful and brilliant civilization, the growth of ages, and apparently destined to last for ages, gradually degenerate? In other words, why did the creative power of its makers wax faint?"² It is for the analysis of philosophy to examine whether there are rational grounds for the view that such energy must in the course of time wax faint. I do not think that the ultimate ground of the decay of a people, any more than of its advance, can be found through study of biological, racial, or economic factors, but into this question it is not possible here to enter.

In conclusion, it has been argued in this paper that the detection of illusions of the age, tending to weaken the springs of action, is a function which belongs to philosophy. The idea of historic necessity or doubt of the possibility of historic freedom has been selected as an example of the first importance and relevant to the present time. In so far as such a concept is concerned in the determination of our apprehension of events through which we are passing—their form and significance—it may be termed a first order category of illusion. To contribute to the removal of such an illusion, by analysis

¹ *Ethics*, translated by Stanton Coit, Vol. II, p. 337.

² *A History of the Ancient World*. M. Rostovtzeff. translated by J. D. Duff, Vol. II (Rome).

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of the conditions which give rise to it, would be to contribute to the destruction of a lie in the soul, as conceived by Plato. For it involves the kind of contradiction which, as he shows in the *Sophist*, is one chief source of evil in the soul. Whether in the precise sense proper to philosophy we can speak of the soul of an age or people, or, with Professor Hartmann, examine the true or genuine and the false elements in this, makes no essential difference to the problem as treated in this paper. It is a question of fundamental importance for social philosophy and, in the end, for metaphysics. But the considerations which have been here adduced will be equally applicable, whether there be any such common or "objective mind" or only the many minds of individuals similarly affected.

SCIENCE, PHILOSOPHY AND RELIGION

W. R. INGE, K.C.V.O., D.D., D.Litt., F.B.A.

THE subject which has been chosen for me is sufficiently comprehensive. Several years ago I wrote the last of a series of essays in a book called *Science, Religion, and Reality*, in which, as requested, I tried to sum up the contributions of the other writers, with reflections of my own. I have also given a short statement of my opinions in the first volume of that interesting book, *Contemporary British Philosophy*. Lastly, I have tried, in a book published in the autumn of 1933, to consider the religious and philosophical implications of recent scientific theories and discoveries, and particularly of the conviction held by our leading astronomers and mathematicians that the Second Law of Thermodynamics is unassailable, so that the ultimate extinction of the universe as we know it is certain. I showed that the acceptance of this verdict raises important questions for the philosopher and theologian. The philosopher cannot avoid considering with increased interest the very difficult problem of the status of Time in reality. The theologian, who has already abandoned the notion of a geographical heaven above our heads, must reconsider the popular identification of eternity with unending duration. These are not new questions; but in a democratic age a problem becomes practical when it is brought before the eyes of the man in the street.

The reviews of *God and the Astronomers* (I apologize heartily for that dreadful title and for the star-spangled jacket) have not helped me very much—reviews seldom do. One of my critics, Lord Rutherford, has evidently not read the book, since he supposes it to be an attack upon the Second Law. That eminent man is no doubt much better employed than in reading my books, but in that case I think he might be better employed than in reviewing them. I expected to be torn limb from limb by Professor Alexander, if he deigned to notice the book at all. But that kindest and most courteous of men has dealt very gently with me, in the *Manchester Guardian*. Of course, he objects to my philosophy of values on the ground that a value must satisfy somebody, and that I will not allow this criterion to be applied. This, however, only makes clear the main crux of the whole problem—the question of Time. If God is only encountered towards the end of a temporal process, and if we can hardly say that He exists till He is so encountered, there is no conscious subject for whom the supreme values are truly real, and so they are not

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truly real. But the Great Tradition in philosophy—at any rate in Platonic and Christian philosophy—finds the actualization of the supreme values in the mind of an unchanging and eternal God. Immense difficulties remain; but this particular objection does not trouble me.

The Professor's admiration of Bergson shows that he must be considered to have thrown his great weight into what I have called the Modernist scale, and against what Catholics call the *philosophia perennis*. Again, the question is how far we ought to "take Time seriously." The problem is complicated by the mathematical theory that Time is a fourth dimension, and that instead of Space and Time we should speak of Space-Time. Professor Alexander is no mean mathematician, and he understands Einstein and his supporters far better than I can hope to do. But when we try to build a philosophy on this mathematical theory, I cannot help thinking that the synthesis of Time and Space is the synthesis of the lion and the lamb or the lady and the tiger. They return from the ride with the lady (Space) inside, and the smile on the face of the tiger (Time). Bergson does not seem to care about Space, and Professor Alexander relegates it to a very subordinate position. Bergson accuses the old philosophy of spatializing Time. He himself makes Time into an absolute, and I cannot make out what he wants to do with Space.

In fact, I do not think the old antinomy—and the old impasse, "Are Time and Space infinite or bounded?"—have been transcended or solved by the Modernist Science and Philosophy. I know I am out of my depth when I try to understand Einstein's statement (accepted by Jeans, Eddington, and others) that Space is "finite but unbounded." The only explanation, adapted to the meanest intelligence, my own, that I have seen is that if you walk round the edge of a circle you will come back to the place from which you started. This is from Sullivan's excellent but misleadingly named book, *The Limitations of Science*. Well, we all knew that without Riemannian geometry. We have even known circular arguments. But perhaps I don't want to walk round the circle; perhaps I prefer to dig through it. Then I shall not come to the place from which I started. Or perhaps I want to leave the circle altogether. A disrespectful but by no means negligible American critic says: "If Einstein thinks that nobody can jump off his circle, he can't know much about fleas."

We are told also that Space is expanding. As far as I can understand, by Space they mean Space occupied by matter. The nebulae are receding from each other and from what we may call their centre. Is it really a foolish question to ask, Into what are they expanding? Does not the whole theory rest on the familiar Euclidean and Newtonian conception of Space? And does not the idea of

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Space imply that there is no point anywhere with nothing beyond it?

Similarly with Time. Eddington very candidly says that his theory demands that Time "started off with a bang," and that he cannot believe this. If it did not start off with a bang, at a date which we could name if we knew it, why did Entropy not run its course much sooner, or, if it had no beginning, how can its entire content consist of a process with a beginning, middle, and end? I would go further and ask, Is it not part of the conception of Time that there is no moment within it which is not preceded by one moment and followed by another? Does the mathematical synthesis of Space-Time do anything to answer these questions? I venture to think not.

If I am right in thinking that mathematics gives us no help in solving a contradiction which inheres in our very ideas of Space and Time, it follows that the solution must be sought outside Space and Time. In other words, Space and Time proclaim themselves that they are not ultimates, either separately or in conjunction.

There is another point which, though it is no business of mine, since it is a purely scientific difficulty, I cannot refrain from mentioning. The theory of an expanding universe seems to be quite inconsistent with the time-scale which numerous converging arguments have almost established for the solar system. Most of us know that the age of the sun has been estimated at about seven or eight billion years, and that of the planetary system at about two thousand million. But the greatest age compatible with the theory of an expanding universe is one of some thousands of millions of years. If the galaxies are receding, it has been calculated, by tracing the process backwards, that all the universe would have been a compact mass long before we get back to billions of years. To the outside, this looks like the famous old quarrel about the age of the earth, between physicists and geologists, and about the age of the sun before radio-activity and the annihilation of matter were thought of. In this case the advocates of the longer period won. It may be a matter of temperament, but I expect the long period will win again. If, however, the shorter period wins, it is the opinion of some scientists, such as Sullivan, that the theory of a building-up process, from smaller atoms into larger, may become acceptable. In either case, since the degradation of energy and the recession of the nebulae seem to be well established, and since they are incompatible with each other, there seems to be no escape from believing that some very important principle is yet undiscovered.

I have read carefully Sir James Jeans' new edition of *The Universe Around Us*. He does not use the very perplexing theories about Space-Time, and he does not discuss the scientific difficulty which I have just mentioned. He accepts the usual estimates of the past

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life of the sun and of the planets. He thinks that the sun may continue to shine for some fifteen billion years, and that the dwellers on earth may drag out a rather chilly existence for a billion years or so. It is, however, possible, as he reminds us, that the sun may suddenly blaze out into a *nova*, or shrink into a white dwarf. Either of these would extinguish our precious race at once.

He will stand no nonsense about the Second Law. "Imagination sees new heavens and a new earth coming into being out of the ashes of the old. Science can give no support to such fancies. She cannot prove that the fanciful will not happen—she can only calculate the odds against it happening. And these prove to be so enormous that we may safely disregard altogether the possibility of its occurrence." He adds: "Perhaps it is as well. It is hard to see what advantage could accrue from an eternal reiteration of the same theme, or even from endless variations of it." This seems to me an odd point of view—a kind of prejudice against endless duration. Eddington shares it.

For most of us the prospect that the whole of history will one day be as if it had never been—that nowhere in the vast universe will there be life or intelligence or consciousness—is rather chilling. We may have to accept it; Jeans and Eddington say we must; but I do not find it easy to say, "So much the better." Whitehead, without expressing any preference, leaves a large loophole for future discoveries. "The moral to be drawn from the general survey of the physical universe, with its operations viewed in terms of purely physical law and neglected in so far as they are inexpressible in such terms, is that we have omitted some general counter-agency. This counter-agency, in its operation throughout the physical universe, is too vast and diffusive for our direct observation. We may acquire such power as the result of some advance. But at present, as we survey the physical cosmos, there is no direct intuition of the counter-agency to which it owes its possibility of existence as a wasting, finite organism." He implies that there must be such an agency, though I do not think he has joined those who find a *deus ex machina* in the cosmic rays.

I may be asked: "Why, since you end your discussion of the doom of the universe by reminding your readers that the Christian tradition has always predicted such an end, and has expected it to come very much sooner than our men of science think probable, should you have gone out of your way to study subjects which are not in your line, and to prefix to a defence of the traditional philosophy of religion a discussion the issue of which, as you say yourself, is not of vital importance to religion?"

I have asked myself this question. I admit that the withers of the orthodox theologian are unwrung. But the orthodox theologian

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believes in an endless *future*; and when once you use the word *future* you have to find a stage for whatever the future may bring forth. Science can hardly find such a stage, either on this planet or anywhere else. I have in my book answered this by accepting Bosanquet's dictum that to throw our ideals into the future is the death of all sane idealism, only adding that if we attempt to picture our ideals without using the categories of Space and Time they will have a very ghostly existence for us.

But my trouble is rather metaphysical than religious. Let us grant that "earth is but the shadow of heaven"; that "every truth is a shadow except the last"; that "life like a dome of many-coloured glass stains the white radiance of eternity." Here we are on the lines of the Platonic tradition. "Let us fly hence to our dear country." But the visible world is no deceiving phantom; it is the creation and the copy of a higher sphere of existence. "Time," say the Platonists, "is the moving image of eternity." But is a wasting, doomed universe the moving image of eternity, and not rather a moving image of something very different? How can a dying world be a symbol of a world which knows no change or beginning or end? Does not the Second Law, with all that it implies, cut the cable between the Intelligible or Spiritual World and the World of Sense?

That this misgiving is not baseless is shown by the remark of Thomas Whittaker, one of the ablest expositors of the Neoplatonic philosophy. He thinks that the establishment of Entropy as the supreme and final law of the universe would "disprove" the philosophy of Plotinus.

Well, we none of us like to hear that our philosophy has been disproved, and we are not very ready to believe that any discovery in physical science could disprove a time-honoured type of idealism. I think Whittaker puts it rather too strongly. It is true that if the whole of creation can be summed up as the progressive realization of one great divine purpose, and if the end of this stupendous scheme, with all the labour and blood and tears, all the faith and hope and love which it has cost, is to be not the achievement of some splendid result, but final stultification and universal death, we should probably be driven, not towards Platonism or Christianity, but to some Asiatic world-renouncing creed like Buddhism. Human effort having been proved to end in nothing, we should have to admit that man walketh in a vain shadow and disquieteth himself in vain. But a cosmic law of unending progress has never been part of Platonism or of Christianity. It is merely the aftermath of the revolutionary fever of the eighteenth century and a substitute for the Christian hope of eternal life, which was then burning very dim. If, on the other hand, it is the lot of all that is born into the world to fulfil in some measure a finite and temporal purpose in the mind of God, and then

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to take its place in the eternal order, there is nothing fatal in the discovery that the life of stars and planets, like the life of individuals, has its destined term. Some modern philosophies, which give an absolute value to Time and history, are, it seems to me, hard hit by the doom which Science pronounces on the universe; but Platonism is not. The way in which this prediction hurts us is rather different. Plotinus teaches that all grades of being, in their various degrees, flow forth from the primal source of Being, the One or the Good or Perfect; and that this overflow from the divine nature is no arbitrary fiat but a necessary result of the Supreme Being or First Principle being what He is. It is no accident that all things are linked together in an unbreakable chain. God creates because, being God, He must; "it is His nature to"; and as long as He is God He must create beings in His own image, though imperfect copies of His perfection. Thus for the Platonist the visible world is good, beautiful, and holy, and we can hardly believe that there will ever be a time when no rays of the divine perfection will shine in any part of the universe, for intelligent creatures to behold and enjoy. If life and soul and spirit are the result of a strange and unlikely accident in one corner of the universe, a mere evanescent flicker which will soon disappear and leave no trace behind, a local symptom of the disease of dissolution, it hardly seems as if God can be what we have supposed Him to be. I do not say that it destroys my philosophy, but it does to some extent chill my faith.

My way of escape is to remember that we do, as a matter of fact, frequently ascend in heart and mind above the world of time, space, history, and even personality. This is what I mean by reality as a kingdom of absolute or intrinsic values. They are very much the same as Plato's Ideas, as I understand them. I have tried to explain my philosophy of Values in my recent book. But since Professor Alexander is far from satisfied with it, I will offer some comments on his new book, *Beauty and Other Forms of Value*, which has come out since mine was published. This may perhaps make my own position clearer, though the Professor is not likely to regard them as serious criticism.

"Nature is beautiful," he says, "only if we see it with the artist's eye." The nature we find beautiful is not beautiful in itself; we select and combine; we construct and interpret." Yes, but who gave us the standard? What makes us recognize that this selection, combination, and interpretation of external nature lifts us out of ourselves, makes us happier, and is an enrichment of our personality? The Professor expresses a great deal that I mean when he says: "The beautiful, as that which satisfies an impulse become contemplative, is *disinterested*. . . . In essence, the beautiful is shareable because it is not *personal and practical*." This is in fact the distinc-

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tion, immensely important, between absolute or intrinsic and instrumental values. This characteristic of the higher values is emphasized in other parts of the book. "In science the mind depersonalizes itself." "Truth is the satisfaction of disinterested curiosity." "The distinctiveness of morality lies in its disinterestedness." This is very welcome as an answer to the pragmatists. In the higher values the "I," the form of reference in the instrumental values, is forgotten. So it is in our religion. "What is the Cross?" said a witty Bishop, speaking to children. "It is the 'I' crossed out." But in philosophy we have to consider the meaning of this self-transcendence, and it can only be found in the real status of the human soul or spirit in a super-individual order. The same characteristics, as I have shown, are found in, and determine, all the absolute values.

But I am unable to follow this great authority when he makes Time and public opinion the arbiter of value. For instance, of Christ he says: "While goodness is the artistry of the gregarious instinct, there is room for the revolutionary moralist, the man who, putting forward a scheme of goodness new and paradoxical, like Jesus, is in fact forecasting a social scheme, who is in truth a genius of a social life which has yet to be, and which if sound wins its way from derision to acceptance." Alas, that is not at all what Christ expected, nor what has happened. "When the Son of Man cometh, shall he find faith on the earth?" Was it the Galilean who conquered with Constantine? "Right for ever on the scaffold, wrong for ever on the throne." Christianity is something much more heroic than an intelligent forecasting of the way the cat will finally jump. We cannot imagine Christ saying, like Jerome of Prague to his judges, "Post centum annos vos cito"; nor like Martial, "Si post fata venit gloria, non propero." No; as Anatole France says, "L'avenir est un lieu commode pour y mettre des songes"; but it is not to posterity that the brave man appeals. There is, I am afraid, no doubt that Professor Alexander makes public opinion, which he frankly calls the tyranny of the majority, the supreme arbiter. "The only rights," he says, "are claims that have been recognized." So there are no natural rights, no absolute standard of justice and injustice. When Socrates is bowed out at the door, Thrasymachus comes in at the window.

I wish he had carried the principle of the objectivity of value to its conclusion. "Morality is objective because it is determined by the adjustment of individuals, and has *therefore* authority over any one individual." Is this "objectivity"? I prefer the independence of Catholic casuistry. "Lex iniusta non est lex," says Suarez.

Before proceeding further in a defence of my conception of absolute values I should like to say something in reply to an exceedingly kind review of my book by the great mathematician Professor Whittaker of Edinburgh. He thinks I have paid too much attention to Entropy,

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which, he says, "is not established beyond dispute. For the argument of Eddington and Jeans is based entirely on the classical or non-relativistic thermodynamics. . . . Tolman has shown that in certain cases a universe expanding or contracting can do so reversibly." Well, more power to Tolman's elbow; I have suspected something of the kind myself; but relativistic thermodynamics is out of my depth.

He then says: "The distinction between finiteness and boundedness is obvious to a mathematician, but seems to be very difficult for everybody else." It certainly is; I am afraid our ignorance is "invincible," as the Roman Catholics say in their charity to poor Protestants.

What follows is more important still. I have argued that a scientist has no right to take refuge in Berkeleyan mentalism. Professor Whittaker says: "Our knowledge of the objects treated in physics consists in the study of the relations between pointer-readings. Atoms, electrons, and so forth are not, strictly speaking, necessary in physics at all; they are introduced merely as picturesque aids to the imagination. The mathematics, on the other hand, is inherently necessary." Now no one disputes the right of the mathematician to make what patterns he pleases out of hypothetical or imaginary entities. But if he is really indifferent to the question whether these entities exist *in rerum natura* or not, I cannot help asking why he takes such infinite trouble to weigh, measure, and count material objects which are not mathematical but are given to him as brute facts. We all know the story of the Frenchman, the Englishman, and the German who were set to write an essay about the camel. The Frenchman visited the Jardin des Plantes, and produced a lively sketch of the appearance and manners of the animal. "Voilà le chameau." The Englishman travelled in Africa, and wrote an ill-composed treatise about the habits of the camel as he had observed them. The German retired to his study, and evolved the idea of a camel out of his inner consciousness. He could do this better—as Hegel and Fichte knew—without any exhausting preliminary research. But our scientists are genuine researchers, and they begin with ponderable matter assumed to be real. In the course of their investigations they find that matter, in its ultimate analysis, is not, in the ordinary sense, material. It is defecated to a transparency. Whereupon they say, "Avaunt, ye materialists; I am an idealist!" They have got rid of the dog, tail and all; but they want to keep the wag. The Cheshire cat is gone, but the grin remains. I really don't think we can disprove materialism by making positive and negative electrical charges devour each other like the Kilkenny cats. Besides, are there not queer things called neutrons, not electrically charged, and possessed of weight? Begin with mathematical symbols, and you can end with mathematical symbols; but if you begin with

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concrete stars and atoms, you cannot end with pure mental concepts. I suppose there is an answer to this, but at present I am unconvinced.

To return to my main point in constructive philosophy. The old canon that *ens est unum, verum, bonum* is still to be maintained. Reality is *one*, against dualism and pluralism; it has degrees, but they are degrees of approximation to a fixed and absolute standard. It is *true*: "the perfectly real can be perfectly known," as Plato says; there is no conspiracy to deceive us. It is *good*: the axiological standard is a real standard; being and value cannot be separated. To quote a modern writer, what we recognize as value when our life is fullest and our soul at its greatest stretch, that we may confidently accept as real.

In opposition to this traditional philosophy, our modern guides turn the absolutes of the moral, artistic, and religious consciousness into the relatives of an evolutionary process; they make history the self-development and self-revelation of the divine Spirit, and the eternal values mere instincts in the service of life. This sceptical relativism has invaded Science itself, which, as we have seen, is infected with illusionism, the "as if" of Vaihinger. Bosanquet's warnings against futurism have been disregarded. Neither the abandonment of the old superstition about progress, so naïvely accepted in the last century, nor the dysteleology so emphatically proclaimed by physics and astronomy, have prevented the Time-philosophy of Bergson, Croce, and Gentile from winning many adherents in this country.

There is a natural metaphysic of the mind, which refuses to separate value and reality. It does not seem to me to matter much whether our new guides call themselves realists or idealists; that opposition is not fundamental. But to give us a philosophy without an ontology—this is indeed a vital matter.

Is it not the timeless order of values which alone gives the time-process significance? Are there not many things which we feel to be real, but which do not belong to the world of space and time, and which cannot be communicated in the idiom of space and time? We recognize these as part of our knowledge; they are not prejudices, but the foundation of any intelligible theory of reality. Bergson bids us overcome our "prejudice" in favour of the permanent over the changing, and proceeds to make the changing the ultimately real, doing violence to our deepest convictions. As Pringle Pattison says, we must start with a logically unsupported judgment of value. It is *logically* unsupported just because it is fundamental. These are the bricks out of which we must construct our fabric.

What is the metaphysical status of values? I dislike the word "validity," which Urban, to whom I owe much, uses freely. I entirely agree with him when he says that "the indefinability of value means

merely that we have to do here with one of the ultimate and underivable concepts with which we think or understand the world, and it shares this lack, if one wishes so to call it, with other concepts, such as being, existence, and reality." But "validity" for him seems to mean what ought to be, as opposed to what is, and this makes value a non-existential concept. He seems to deny static values, though these are obviously present in aesthetics, and entangles his value-philosophy with ideas of evolution and progress, which belong, I should say, to the school against which his book (*The Intelligible World*) is a sustained polemic. However, as he agrees with Bosanquet that "ultimately Time, and the Time process, are irrelevant to value," and says, "There is no such thing as entropy of being, or entropy of value," I think he is really on my side, though there are a few expressions in his book which do not seem to me quite consistent.

The doctrine of Values implies, I think, a super-individual subject, for whom the values are actual. The notion of an emergent Deity seems to me part of the futuristic error of which I have already spoken. The words God and Deity ought not, I venture to say, to be used in this way. It is an attempt to retain the religious meanings and values which are attached to the word while denying the assumption of existence or reality on which all religious values depend.

The word "substance," I suppose, has become a scandal in modern philosophy. But it simply means, as Lossky says, "something living and real, something that has in it no merely intellectual significance." To a Platonist, values are "substantial," and they are far from being merely ideals, because there is a spiritual world in which they are at home and operative. I know well that in all that we try to say about "heaven" we use grotesquely inadequate and crudely pictorial language. It is a pity, because astronomy spoils our pictures. But it does not spoil what we mean by them. Plato was not ashamed to speak of *τόπος ἀτόπων*, and we must do the same, for we cannot help it.

A great difficulty in the philosophy of values is the doctrine of degrees of reality. The principle of *scale* is, as Urban rightly says, an *a priori* character of value as such, and in existence apart from value there is no scale. I have also pointed out that whereas in the Being there are no negative signs, in values and most distinctly in moral values evil is no mere defect of being, but, to our minds at least, positive disvalue. This does make the identification of existence and value difficult. I fancy the new Time-philosophy is an attempt to insert a value-scale into existence as such by assuming that the later in time is necessarily better than the earlier. It will not do. Time has no essential connection with value-judgments, though most values need some duration in which to actualize themselves. We must insist that, though they do not belong to Time,

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Values are indissolubly bound up with reality as it is presented to our minds.

Traditional philosophy has always made ultimate reality non-spatial and non-temporal. But, you will say, traditional *religion* has done nothing of the kind. Well, I have tried to answer this. When our feelings are deeply stirred, we use concrete imagery, clear outlines, and bright colours. We must do so; we need not be ashamed of it. When I think of heaven, or of Plato's intelligible world, it begins to look very like an improved duplicate of the world that I know. "The swan on still St. Mary's Lake floats double, swan and shadow." I am fond of quoting Isaac Pennington's words: "Every truth is shadow except the last. But every truth is substance in its own place, though it be but shadow in another place. And the shadow is a true shadow, as the substance is a true substance." Moreover, in popular teaching we must not disdain picture-book theology.

I agree with Urban that the weakness of the whole group of philosophies which make evolution itself creative is the false assumption that time, process, tendency themselves carry meanings and values. This packing of time or space-time with meanings and values is the only thing that gives to modern doctrines of emergence the apparent intelligibility they seem to have. Time and Space are as real as the objects for which they form a framework. But they cannot lead beyond themselves except by mere repetition of themselves; they have no "sufficient reason" in themselves. You cannot endow Time with a *nisus* without transforming it into something quite different from the *becoming* either of common sense or of science. So treated, Time becomes a mysterious entity endowed with some of the attributes of divine Providence.

Mathematical science clearly wants to substitute a logical order for the empirical space-time order; and with this we have no quarrel, for it means that the intelligible world is not spatial or temporal. But what room is there for historicism in a logical order? Bergson gives plausibility to *la durée* by de-temporalizing it, packing it with extraneous values, though of course he does not see this himself. He also errs, I think, by making biological categories world-categories, for life is a very rare and sporadic phenomenon in nature.

In conclusion, I believe with Lotze that our judgments of absolute value are "the inspirations of reason," and this is the highest kind of authority. We add nothing to their claim upon our confidence by translating them into any subordinate concepts. We see dimly before us a still higher form of experience in which all contradictions are harmonized. This, if we could attain it, would be the goal of religion, philosophy, and science, all three. The beatific vision can be seen by few and described by none. Nevertheless, it is a fact. As Whitehead says, "The fact of religious vision is our one ground for optimism."

INTRODUCTION TO EIGHTEENTH-CENTURY AESTHETIC

SENATOR B. CROCE

THE dominant feature of eighteenth-century aesthetic is the inquiry and discussion concerning the theory of "taste." There is material or bibliographical evidence of this in the rapid sequence of treatises, essays, inquiries, observations, and controversies on this subject, extending from the close of the seventeenth to the last years of the eighteenth century, and bearing the names, in France, of Dacier, Bellegarde, Bouhours, Rollin, Seran de la Tour, Trublet, Formey, Bitaubé, Marmontel, and, still more eminent, of Montesquieu, Voltaire, d'Alembert; in England, of Addison, Hume, Gerard, Home, Burke, Priestley, Blair, Beattie, Percival, Reid, Alison; in Italy, of Muratori, Calepio, Pagano, Corniani; in Germany, of Thomasius, J. U. König, Bodmer, A. von Schlegel, Wegelin, Heyne, Herz, Eberhard, J. C. König, and, by German influence in Hungary, Szardahely; and, greatest of all, Immanuel Kant, whose *Critique of Judgment* consists in the main of a critique of the aesthetic judgment of taste. This list of names is intended to give examples merely, not a complete catalogue. During that century the word, originally a metaphor from the sense of taste, the palate, though not unknown before, acquired an altogether new and extremely wide popularity;¹ and the liveliest interest was taken in the problems connected with taste, whose solutions, however, gave rise to increasingly acute controversies and perplexities. "Il n'est point de société," wrote Seran de la Tour, and he was not the only one to say it, "dans laquelle on ne parle du goût; rien de plus commun que les conceptions sur ce sujet; chacun alors s'empresse de dire ce qu'il en pense; mais à peine s'est-on arrêté à une proposition pour en expliquer l'idée, que la contradiction suit immédiatement l'assertion."²

¹ The Hungarian aesthetician, G. Szardahely, named in the text, observes: "... ista hominis facultas sentiendi pulchrum et turpe dicitur *gustus*, non penitus novo, sed magis usitato nomine: constat enim mihi, ac eadem intelligentia locutos aliquando fuisse Graecos Latinosque veteres, metaphora a gustu palati facta. Modus iste loquendi tunc erat infrequens, deinde penitus cecidit iacuitque, dum tandem ab hominibus antiquae originis et spiritus suscitaretur et illa hominis proprietas facundo hoc Latinismo cognominaretur. Iam modo nomen illud gentium praecipuarum civitate est donatum, habetque sensum non adscititium sed proprium" (*Imago Aesthetices seu doctrina Boni Gustus breviter delineata*, Budae, 1780, p. 8).

² *L'art de sentir et de juger en matière de goût*, nouvelle édition revue et corrigée par M. Rolland (Strasbourg, 1790; ed. 1, 1762).

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It is desirable to grasp and define the exact nature of this problem, and to that end it must chiefly be said that the problem was only the new form of a very old one, first raised by the sophists and dealt with in various ways by the Greek philosophers, further discussed by the Fathers and Schoolmen, and taken up again by the Platonists and Aristotelians of the sixteenth century: "What is the beautiful?"

This ancient problem had to this extent been approached in the wrong way, that the attempt had been made to define the character or characters of beautiful things, natural or artificial, that is, to conceive the beautiful out of relation to the human mind; hence the impossibility of a satisfactory solution. The doubts and dissatisfactions expressed in the *Hippias Major* may be taken as a symbol of the debate that occupied the succeeding centuries.

The same faulty approach persisted, in spite of appearances, in the new form of the problem, when the question "What is the beautiful?" was replaced by the question "What is taste?" Taste meant the pleasure felt in the presence of certain objects, and since it could not be simply identical with pleasure as such, nor with the pleasure excited in the mind by the true or good or useful—for without these exclusions, implicit or explicit, the problem would not have arisen—the question "What is the pleasure of taste?" turned into the old question once more: "What is the character, or what are the characters, of the objects that produce the pleasure of taste?" It was comparatively rare for a treatise to take the nature of the beautiful for its direct subject and title, though this was sometimes done, for example, by Crousaz, André, and Hogarth; but all, or almost all, discussions of taste developed into theories of the beautiful, natural and artificial, essential and arbitrary, intellectual and moral, visible and audible, of bodies, of spirits, of God, and so forth; even Kant's, which, as is well known, distinguishes the beautiful into "free" and "adherent," as well as into natural and artificial, and ends by explaining it as a symbol of morality.

It was no doubt both significant and important that the eighteenth century put first the inquiry into the pleasure of taste, that is, of a psychical movement, thus effecting in aesthetic, as elsewhere, the transition from ontology to psychology, or rather from physics and metaphysics to the philosophy of spirit, in the tradition of all modern philosophy since Descartes. That path was bound to be followed as the only promising one, the only one which did not seek a goal outside itself, since in it alone every stage was both goal and starting-point. But the attempt at a philosophy of the aesthetic spirit was fatally hampered by its initial assumptions. Pleasure, the pleasure of taste, was not an active form of the aesthetic spirit, but a passive moment of it, and was therefore helpless to determine its proper nature. So far as pleasure is concerned, one spiritual activity is like

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any other; trying to distinguish these activities by means of pleasure is like—to use a fanciful parallel—trying to distinguish the different kinds of fish by means of the water in which they all live and move. This is why the eighteenth-century writers were unable, as I have said, to avoid being drawn back into the old, hopeless attempt to determine the nature of the beautiful—of things objectively, physically or metaphysically, beautiful.

There is a concept which is at once the evidence of this unsatisfied but constant effort towards a theory of the aesthetic spirit, and the tomb which holds its mortal remains: I refer to the concept of feeling, which rose during that century to the status of a theory and the dignity of a category of the spirit. There were no doubt exigencies in moral philosophy and the theory of knowledge, becoming acute and as yet unsatisfied, which contributed to the formation of this concept; but the main contribution came from the inquiries into aesthetic, on taste and the beautiful, and these were what led to the erection of feeling into a third spiritual form alongside of, or intermediate between, the form of knowing and the form of willing. The concept of feeling (in the German writers *Gefühl*, or sometimes *Empfindnis*, to distinguish it from *Empfindung*), so understood, is nothing but the systematic expression of an absurdity: passivity placed alongside of activity, as if it were one activity of a special kind, co-ordinate with the others. Historians of philosophy have erred in praising the eighteenth-century philosophers and psychologists for discovering this category of the spirit; for the supposed discovery was in fact a rash adventure which distracted them from genuinely discovering that of which they were in search. Defeat no doubt has its glory, but not the glory of victory.

In another respect, much praise is due to these inquiries concerning taste: not for the conclusions to which they led or in which they halted, but for observations and thoughts by the way which still possess a positive value. Concealed beneath the ill-formulated problems, the real problems made themselves felt, albeit through a distorting medium. For that matter, there was positive value in the ancient and medieval and Renaissance discussions of the beautiful, in so far as they held firm, in spite of inevitable waverings, the notion that beside the values of intellectual truth, moral goodness, and practical convenience there was another value, not capable of reduction to any of these or of analysis into a combination of them, namely beauty. And certain characteristics of the beautiful had been noted, such as its connection with contemplation and those senses which were thought especially contemplative; the unity which it gives to variety without abolishing the variety itself, but on the contrary adding life to it by harmonizing it; and so forth.

Far more fertile were the eighteenth-century inquiries concerning

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taste, with their demarcation of a spiritual realm belonging neither to intellect nor to practice. What the previous century had expressed by asserting a *pulchrum* distinct from the *verum* and *bonum*, the eighteenth repeated in a more profound form by distinguishing a "sense of order and proportion," a "moral sense" of the good and the beautiful at once, an "inner sense" as detected within the human mind by Shaftesbury, Hutcheson, and others, or "feeling," the word most commonly used to denote the aesthetic sphere: to denote it in a manner still obscure and hesitant, but yet to denote it and to warn all comers against denying or forgetting its existence. And the general tendency of all these writers was hostile to the old saying, *De gustibus non est disputandum*, a saying which, in its secondary application to the facts of beauty, had the effect of denying and ridiculing their claim to originality and reality, and reducing them one and all to the caprice of sensation and individual fancy, or (as we should say to-day) to a hedonistic and utilitarian level. More or less successfully, by various expedients and with frequent contradictions, these writers of inquiries and treatises defended the rationality or absoluteness of taste, as a thing about which there is and ought to be disputation because it has its own criterion of value.¹

It is equally characteristic of them to insist on the difference between the pleasure of taste and the pleasure caused by stimulation of the senses; the disinterested nature, or freedom from reference to utility, which belongs to this pleasure; the absence of end in a unity-in-variety which is an end in itself, that is, the peculiar synthesis effected by the beautiful, which Hemsterhuis, confusing ideal power with temporal rapidity, defined as "the greatest possible number of ideas in the shortest possible time." Burke, for instance, a strongly empirical and not highly philosophical mind, and as an empirical psychologist tending towards the position of a physiologist, none the less insists on the disinterested character of aesthetic pleasure, its difference from the judgment of "fitness" or purposiveness and from that of the perfection of a thing according to its end, and upon the difference between "love," which has beauty for its object and is contemplative, and "desire," which has affections of sense for its object and seeks possession; and so forth.

All these and other propositions, made by eighteenth-century

¹ E.g. Gerard (*Essai sur le goût*, French tr., Paris, 1766, p. 241): "On dit communément qu'il ne faut pas disputer des goûts. Cette maxime est vraie si par goût on entend le palais, qui rebute certains aliments et qui en aime d'autres. . . . Mais la maxime est fautive et pernicieuse, lorsque on l'applique à ce goût intellectuel qui a les arts et les sciences pour objets. Comme ces objets ont des charmes réels, de même qu'il y a un bon goût qui ne les aperçoit point; et il y a certaines méthodes dont on peut se servir pour corriger ces défauts de l'esprit qui corrompent le goût."

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theorists of taste and the beautiful—including the invention of a third spiritual form, namely feeling, and the reference of the aesthetic and of beauty to that—unite in the Kantian *Critique of Judgment*, which, analysed into its components as by recent historians of thought, appears to offer little or nothing fresh;¹ yet the whole of it is fresh, and has led to the forgetting of those previous treatments which Kant knew and used. The novelty lies in the critical and philosophical sense with which he worked out and raised to the rigour of systematic concepts this confused and fluid mass of ideas; and it was a follower of Kant, and a notable aesthetician, Heydenreich, who shortly after the appearance of the *Critique of Judgment* proclaimed the new glory of German philosophy, which by contrast with English philosophy had introduced into the theory of taste, hitherto usurped in part by the dogmatic philosophers and in greater part by the empiricists, the "critical" method, combining speculation and experience.² And the provisional completion given by Kant to this succession of efforts took its place in the general process which I have described elsewhere, being indeed one of its most brilliant phases, by which modern thought bridged the gulf created on the one hand by ancient philosophy and on the other by Christian thought between reason and sense, morality and life.³

None the less, there remained in the *Critique of Judgment* something not critically worked out, but put together empirically: a legacy taken over from its predecessors. Such was the dualistic treatment of the beautiful and the sublime, handed on to Kant chiefly by Burke, who regarded the beautiful, which he held a social and sociable feeling, a love and sympathy for small and delicate things, as opposed to the sublime, which seeks for great and impressive things and is the pleasure we take in painful and terrifying emotions when we are safe from their practical effects and protected from harm. There remained or reappeared, too, a certain contradiction in substance, at least in the shape in which Kant expounded the theory; for example, in the exclusion from the beautiful of all interest, all purposiveness, and all concepts, as compared with the

¹ See the researches of O. Schlapp, *Kants Lehre vom Genie und die Entstehung der K. d. U.* (Göttingen, 1901), and more lately those of Baemler, *Kants Kritik der Urteilskraft, ihre Geschichte und Systematik* (Halle, 1903), and Cassirer, *Die Philosophie der Aufklärung* (Tübingen, Mohr, 1932), to omit others of less importance.

² See the preface and especially the appendix (I, 185–197) added by him to his translation of a work by one of these empiricists: Archibald Alison, *Ueber den Geschmack, dessen Natur und Grundsätze, verdeutscht und mit Anmerkungen und Abhandlungen begleitet von K. H. Heydenreich* (Leipzig, Weygand, 1792).

³ See my essay, *Le due scienze mondane, l'Estetica e l'Economia*, in *Critica*, xxix (1931), part vi.

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final conclusion that the beautiful is a "symbol of morality"; a contradiction which Herder was quick to remark.¹

But, setting aside these secondary aspects and problems, what must be emphasized in the *Critique of Judgment*, both in its own shape and as representing the outcome of the eighteenth-century inquiries concerning taste, is that the truths laid down concerning the aesthetic or beauty, reached as they were indirectly and by the concealed working of the actual aesthetic consciousness operating in despite of the false statement of its problem, remained detached observations, never closely bound up and identified with the fact to be explained. It would be a caricature, but not an unfair one, to express the characteristics of the aesthetic fact which Kant collected and defined in the form of a riddle: "What is it that pleases without a concept, without a practical interest, as purposiveness without purpose, and is the object of a universal pleasure? If it is not intellectual truth or moral goodness or economic utility, what is it?"

To-day we know the answer: it is poetry, or in general art. But Kant never gave it, and in fact did not know it; certainly it was not art for him. It was not art for the eighteenth-century theorists of taste, who for the most part treated the theories of art and of the beautiful separately, when they did treat both; or connected the two by defining art as imitation of the beautiful or the beauty of imitation. Nor was it for Kant, who conceived art as beauty adhering to a concept, a result produced by the combined play of intellect and fancy, and poetic genius itself as thus producing, combining, and playing.

This, too, was a necessary consequence of the point from which the inquiry set out, namely pleasure, though a peculiar pleasure—that of taste: for pleasure is a passive moment, not an active or productive. A study of pleasure as such could not lead to the concept of poetry or art, or at least could do so only surreptitiously, indcisively, and by snatches; a study of the productive process of poetry and art led thither directly, and offered a bridge to the concept of taste and so to the explanation of what had been thought external to poetry and art, but was yet beauty, and was felt as beauty, and therefore could not be thus external, but must be itself a creature of the human imagination, like the things or rather images that used to be called "beauties of nature."

¹ "Da es vorher noch vier Kategorischen Momente ohne Begriff und Interesse, ohne Vorstellung des Zweckes u. s. f. nicht nur allgemein gefallen musste, sondern sogleich vom Schönen hinabsank, sobald man an Güte dachte; jetzt im letzten Paragraph des Werks wird das Schöne ein Symbol des Guten, des Sittlichen sogar, und zwar *alles* Schöne; schöne Formen, schöne Kleider, schöne Farben, schöne Gebäude" (*Kalligone: vom Angenehmen und Schönen*, Leipzig, Hartknoch, 1800, III, 259-260).

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This study of the nature of poetry and art had been going on for centuries, forming a scientific tradition parallel to that concerning the beautiful, and remaining distinct and separate from it even when the two approached and interlaced. It was here that a true and genuine aesthetic was moving and growing; and it is strange—or rather, not strange to one who considers the prejudice as to the priority of the ideas of the beautiful and of pleasure—that historians of aesthetic have placed this tradition in the background, when they have not left it out of the picture altogether. Thus Zimmermann, to name one only, leaps from Plotinus in the third century after Christ to the eighteenth, and finds in the history of aesthetic “eine grosse Lücke” fifteen centuries long;¹ a gap containing all the ardent labours at the theory of poetry, literature, and art that were pursued at the Renaissance and in the sixteenth and seventeenth centuries, especially in Italy, but also in France, Spain, and elsewhere. Even the concept of taste, “judgment without discourse,” arose in the seventeenth century in Italy;² and precisely in the attempt to describe the judgment of poetic criticism, as did the concept of “genius,” as distinct from intellect, to describe the faculty of poetic creation. The “sublime” belongs to the same tradition, being taken from the highly prized and deeply studied work that went under the name of Longinus,³ where it was clearly and unambiguously expounded and meant, at bottom, nothing but that “excellence” or “beauty” of artistic expression for which the ancient critic had so exquisite a sense.⁴

In the eighteenth century this theory of poetry and art excited less interest and was less widely discussed and less highly valued than the theory of taste; but, in compensation, it worked hard to raise itself to the level of philosophy and organize itself into a system. It may suffice to recall the theory of poetry or “poetic logic” stated by Vico in his *Scienza nuova*, a logic of language or poetry which

¹ *Geschichte der Aesthetik als philosophischer Wissenschaft*, p. 147.

² It is sometimes incorrectly attributed to the Spaniard Gracian, who, as I have elsewhere pointed out (*Estetica*, p. 209), refers the term not to the sphere of the beautiful and art, but to that of practice. Before and after him, the Italians, with or without the word in question, asserted a special aesthetic power or faculty, capable of judging without logical reasoning; this was very clearly defined by Zuccolo as early as 1623. See my recent researches into the history of aesthetic ideas in seventeenth-century Italy, in *Storia dell' età barocca in Italia* (Bari, 1920), pp. 160–210, 217–232.

³ For the authorship and date of the *De Sublimitate* see the recent and important investigations of Rostagni, *Il sublime nella storia dell' Estetica antica* (Pisa, 1933).

⁴ Cf. the way in which he remarks *à propos* of an ode of Sappho that the things said in it are the things said by every lover, but that the excellence of the poem lies in choosing the culminating points (*ἡ λήγεις . . . τῶν ἀκρων*) and combining them (*ἡ εἰς ταῦτ' ἀναλυσίς*): *De Subl.* 110.

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enabled him to interpret Homer and Dante,¹ and the theory of *cognitio sensitiva*, or *Aesthetica*, for which Baumgarten a few decades later claimed the position of a special science.² But neither of these thinkers had pupils or followers to develop and pursue their new and highly fruitful ideas.

One of the two, a German professor and the founder of a school, certainly had pupils to repeat and disseminate his doctrines; but in general they misunderstood them and reduced them to superficiality, and replaced Baumgarten's definition of poetry as "perfect sensuous discourse," which ascribes a peculiar and autonomous "perfection" to "confused" or "sensuous cognition," sometimes by "representation of sensible perfection," sometimes by "sensible representation of perfection"; so that *cognitio sensitiva* or *poetica* finally assumed the aspect of a weakened or mutilated intellectual knowledge, as appears already in Meyer and still more clearly in Mengs, Mendelssohn, and others.³

When Kant in the *Critique of Judgment* undertook to combat the theory of "eminent philosophers" that "beauty is nothing but perfection confusedly thought," and pointed out that a confused cognition of perfection is still an intellectual cognition and distinguished from it, at most, as the plain man's judgment differs from the philosopher's,⁴ he was certainly right; but he was arguing against Wolff or the misunderstandings of Baumgarten's school, not against Baumgarten, who never maintained any such view, and always meant to speak of the *perfectio* of *cognitio sensitiva qua talis*, though doubtless he did not wholly avoid the danger of falling back into intellectualism and conceiving poetry as the sensible representation of the distinct concept.⁵ Kant's confusion is of importance

¹ Even now most German historians of aesthetic (Baumler, Cassirer, etc.) persist in ignoring Vico or brushing him aside, because (they say) he was unknown and did not influence the Germans. None the less, he lived and thought; and the history of thought is not the history of influences on German writers, or any others.

² That Baumgarten belongs to another tradition than that of the theory of taste emerges even from what Baumler writes, though intended to connect him with that tradition: "Baumgarten hat für das Geschmacksproblem im engeren Sinne nicht viel Interesse bezogen" (*op. cit.*, p. 87).

³ Mendelssohn, *Ueber die Hauptgrundsätze der schönen Künste und Wissenschaften* (*op. cit.* Zimmermann, p. 181), expressly says: "Ist die Erkenntnis der Vollkommenheit sinnlich, so wird sie Schönheit genannt . . . die verständliche Vollkommenheit erleuchtet die Seele und befriedigt ihren ursprünglichen Trieb nach bündigen Vorstellungen. Wenn sie aber die Triebfeder des Begehrungsvermögens in Bewegungen setzen soll, so muss sie sich in eine Schönheit verwandeln."

⁴ *Kritik der Urteilskraft*, 15.

⁵ Zimmermann, *op. cit.*, pp. 60-61 (cf. p. 433), says that for Baumgarten beauty is "sinnlich erkannte Vollkommenheit," but neither these words nor

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only as proof that he overlooked or failed to understand the concept of poetry which Baumgarten's system involved; just as he overlooked or failed to grasp the similar concept of poetry or language which, to say nothing of Vico, was gaining ground here and there in the early Romantic movement in Germany. Hence Kant, like the theorists of taste and even the writers of Baumgarten's school such as Riedel, his own immediate precursor in the tripartition of faculties and the connection of beauty with feeling, instead of grasping or even guessing the importance for the philosophy of spirit of Baumgarten's idea of a *cognitio sensitiva* distinct from *cognitio intellectiva* and prior to it, and indeed the whole realm of *facultates inferiores* in Wolff and *petites perceptions* in Leibniz; instead of using these ideas to work out a more organic and concrete connection between the terms of the old antithesis, theory and practice, or knowing and willing, fell back on postulating a third realm of "feeling," a mere pigeon-hole for the facts he had failed to understand.¹

Among the post-Kantian aestheticians, no one pursued the inquiry into these fundamental elements of the aesthetic activity which had been discerned by Baumgarten, studied more deeply by Vico, and apprehended to some extent by other thinkers; no one except Schleiermacher, who for that very reason was misunderstood, slighted, and forgotten. True, while some like Herbart stood by the

this notion are to be found in §§ 15-16 of the *Aesthetica*, to which he refers; it is always *perfectiones cognitionis sensitivae*. Von Stein (*Die Entstehung der neueren Aesthetik*, Stuttgart, Cotta, 1886, p. 358) rightly observes that if Kant means to allude to Baumgarten he is misunderstanding him; thus also Semmler, *Grundzüge einer Geschichte der deutschen Psychologie und Aesthetik von Wolff-Baumgarten bis Kant-Schiller* (Würzburg 1892), p. 345. Perhaps the explanation is to be sought, as by Baumeier (*op. cit.*, pp. 113-119), in the fact that Kant knew the references to the subject in the *Metaphysica*, where Baumgarten on this point was confining himself to Wolff's definition, and also knew Meyer and Mendelssohn, but perhaps had not read, or not read with care, the *Aesthetica*.

¹ The difficulty was felt by some writers of the time; cf. the following quotation from Meiners, *Revision der Philosophie*, pp. 226 *seqq.*, in the learned work of K. H. Politz, *Die Aesthetik für gebildete Leser* (Leipzig, Hinrichs, 1807, I, 22-23): "In der Aesthetik ist die Hauptquelle unserer Kenntnisse noch streitig. Eben so zweifelhaft ist es bisher ob die aesthetischen Begriffe zu dem Foro der bis jetzt von den Philosophen entdeckten Kräften oder einer eignen von den Griechen und Römer nicht wahrgenommen Fähigkeit gehören. Es giebt Männer, die einen angeborenen Geschmack des Schönen und Guten vertheidigen, und dabei unsere Idee von Schönheit u. s. w. als etwas ganz Relatives ansehen. Umgekehrt sieht man wieder unveränderliche Ideale des Schönen und Guten von solchen behaupten, die den Geschmack für eigentümliche kraft hatten. So lange diese Punkte unausgewacht bleiben, scheint die Aesthetik in die Form einer Wissenschaft nicht gebracht werden zu Können."

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eighteenth-century tradition, started from the judgment of taste and sought a concept of the beautiful in formal or formalistic determinations of the object, most of them abandoned the discussion of taste and placed the centre of gravity in their treatises upon art, thus in a certain degree identifying aesthetic with the philosophy of art. In a certain degree, not altogether, and not essentially, because they retained as more or less distinct from this theory of art, although somewhat confused with it, a "callology" or metaphysical theory of the beautiful and a theory of natural beauty or beauty in natural objects. There was no consciousness of the truth that aesthetic is concerned with art and art alone, that outside art there is nothing really beautiful, and that therefore there can be no theory of the beautiful independent of, or parallel to, the philosophy of art. Even when, in the second half of the nineteenth century, psychological or empirical aesthetics took the place of metaphysical or philosophical, these new aesthetics still combined a theory of the beautiful with a theory of art, a combination due to misunderstanding the nature of the things combined; naturally, therefore, this is the view current in the *Aesthetica vulgaris* of to-day.

It was only in Italy, at the beginning of the present century, that this dualism was resolved with full consciousness of what was being done, and an aesthetic brought into being which was a philosophy of poetry, imagination, language, art, and pure intuition and expression; an aesthetic which put the productive process first, showed the beautiful as this process itself in its free development, and reduced to terms of this process the so-called beauties of nature, as themselves spiritual acts and not natural facts. As a result, no one in Italy, not even scholastics or neo-scholastics (and that is saying a good deal), dreams any longer of devising theories of the objectively beautiful, for there is now no place for such theories within our mental horizon, filled as it is by others which have consigned to oblivion the very name of the former occupants and have blotted them out as with a deluge.

In Germany, on the other hand, although the intense study of the history of art has created a demand for a philosophy of art to clear up its main concepts and standards, the problem of the relations between this so-called science of art (*Kunstwissenschaft*) and the theory of the beautiful has been solved in the most superficial and artificially simple manner imaginable: art is assigned to *Kunstwissenschaft*, beauty to aesthetic; as if the whole problem did not concern the relation between the concept of the beautiful and the concept of art, and as if, by handing one of them over to "specialists" and confining one's own attention to the other, one could ever rightly and thoroughly understand either. In the last resort, the root of the error lies in the false conception of a non-

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philosophical or as it is called merely "scientific" (*Kunstwissenschaft*)
treatment of an ideal category.¹

So toilsome and slow is the progress of thought, still in places
congealed and arrested at the same false statement of the problem
of beauty at which ancient philosophy and eighteenth-century
aesthetic once laboured.

¹ For this school of separate *Kunstwissenschaft*, cf. what was already to
be said about it in 1911, in my essay on Fiedler (*Nuovi saggi di estetica*, Bari,
1926, esp. pp. 240-241), and in 1915, à propos of a book by Utitz, my
Conversazioni critiche, I, 20-22; cf. also a short recent book by Utitz,
Geschichte der Aesthetik, Berlin, 1932, pp. 70-73, where he expresses himself
with more caution and reserve.

(Translated from the Italian by R. G. COLLINGWOOD.)

ARISTOTLE'S DEFINITION OF MORAL VIRTUE, AND PLATO'S ACCOUNT OF JUSTICE IN THE SOUL

H. W. B. JOSEPH, M.A.

NICOLAI HARTMANN, in an interesting discussion of Aristotle's account of moral virtue,¹ has called attention to the difference between the contrariety of opposed vices and the contrast of certain virtues. The *ἄκρα* or extremes, somewhere between which Aristotle thought that any morally virtuous disposition (with the possible exception of justice) must lie, are not conciliable. The same man cannot combine or reconcile, in the same action, cowardice and bravery, intemperance and insensibility, stinginess and thriftlessness, passion and lack of spirit. These are pairs of contraries, between which a virtue lies; but the virtue is not a synthesis of the extremes in a pair. It is true that on one interpretation of the doctrine of the mean, the mean is a synthesis of contraries, but not of contrary vices. According to this interpretation, which Burnet adopted, there are contrary tendencies or impulses, *e.g.* fear and delight in danger, and the virtuous disposition combines these in right proportion; but the vicious dispositions also combine them, in other and wrong proportions, the contrariety of these dispositions arising from the fact that either impulse may be unduly preponderant over the other. In support of this interpretation Burnet appealed to Aristotle's theory of bodily health, which was held to depend on a proper *κρᾶσις* or combination of the primary contraries or *πρῶτα ἐνάντια*, hot and cold, moist and dry. Many objections might be brought against this theory of health, both speculative and empirical, though they do not concern us here;² and it may also be doubted whether the theory of virtue is to be interpreted in analogy with it. Among other reasons for rejecting that view it may be noted that to the only illustration of the relativity of the mean to the individual which Aristotle offers it is quite inapplicable; the right quantity of meat for one man is not the right quantity for another, though it is always a mean between too much and too little. I have only mentioned the view here in order to point out that, even if it were accepted, the synthesis of contraries which, according to it, is involved in a virtuous disposition is not that of contrary bad dis-

¹ *Ethik.* c. 61, Gegensatzverhältnis und Wertsynthese.

² Cf. *infra*, p. 176, n. 2.

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positions, the Aristotelian ἀκρα. These cannot be combined in an action, neither do we think that they ought to be; they ought both to be avoided.

But there are contrasted dispositions that we approve, from which, however difficult it may seem to combine them, issue actions both of which may seem to be required of us. A familiar instance is afforded by the respective claims of justice and forgiveness. Hartmann does not mention this, but he mentions justice and love of one's neighbour (*Gerechtigkeit* and *Nächstenliebe*). These stand contrasted; and the action to which a man with a strong sense of justice might be prompted in a given situation may be one from which neighbourly love by itself would hold him back. It is quite possible for a man to have this neighbourly love in strength, with very little regard to the observance of justice, or to have a strong sense of justice and lack any love of his neighbour. But both are good dispositions; and virtue would not be shown, in a particular situation, by an action displaying neither, as it would be shown by one displaying neither of the related and contrary vices, the ἀκρα to the μεσότης. Rather we think that we ought somehow to satisfy the claims of both. The case, therefore, is different with antithetic *Werte*, "values," and with antithetic *Unwerte*, "disvalues." Other examples of such antithetic "values" are purity (*Reinheit*) and fullness of life (*Fülle*); or love of one's neighbour (*Nächstenliebe*) and love of posterity (*Fernstenliebe*).

This antithetic of values is neither so frequently recurrent as the antithetic of disvalues, nor do the two correspond; i.e. the opposed virtues are not respectively contrary to the opposed vices, to both of which, as Aristotle said, in spite of their contrariety to each other, the one virtue which is in a mean between them is, in another way, contrary. Courage is in this way contrary both to cowardice and foolhardiness. On the other hand, the ideally courageous man should display both stout-hearted endurance (*behertetes Ausharren*) and thoughtful foresight, cool presence of mind (*bedachtsame Vorsicht*, *Kaltblütige Geistesgegenwart*); and it is the former which is specially lacking in the coward, the latter in the foolhardy. So again self-control (*Beherrschtheit*) is valuable, and a development of the emotional life (*Entfaltung des Affektlebens*) is valuable; but these are opposed "values," or at least capable of competing. Intemperance, ἀκολασία, and insensitiveness, ἀναισθησία, are opposed disvalues. The virtue of σωφροσύνη or temperance should somehow combine self-control with the development of the emotional life. But since there is a kinship between insensitiveness and a self-control that is not combined with the contrasted "value," the Stoics made insensitiveness itself into a virtue; and because of the likeness between intemperance and development of the emotional life uncom-

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bined with self-control, the emotions have sometimes been rejected altogether.

Strict parallelism here would require Hartmann rather to point to some who had made intemperance into a virtue; perhaps Polus in the *Gorgias* might be cited in this sense; or Alfred Barratt, who said that "the highest virtue consists in being led, not by one desire, but by all," the cause of repentance being "never the attainment of some pleasure, but always the non-attainment of more: not the satisfaction of one desire, but the inability to satisfy all"; though, very inconsistently, he called the highest virtue, as just defined, "the complete organization of the moral nature."¹ But I do not wish to press this as a criticism, nor yet to ask how far anything like what Hartmann has said in regard to courage and temperance could be paralleled for all the virtues in Aristotle's table. That to which I wish to direct attention is Hartmann's suggestion of a synthesis of "values" being involved in the Aristotelian mean; for a synthesis of values is very different from a mean of "disvalues" or κακία.

I think that Hartmann's observation is a good one, but that it points to a more thoroughgoing criticism or restatement of the Aristotelian doctrine that he gives. In his "doctrine of the mean" Aristotle seems to me to have been trying, and failing, to improve on the account of virtue offered by his master Plato. Assuming what I have to say on this head to be sound, it would follow that the necessity for a synthesis of opposed "elements of value," to which Hartmann draws attention, is a special case of a more pervading necessity. I believe that no action is obligatory independently of relation to any good, but that this good may be, and in the best resort is, connected with a life to be lived, to the form of goodness in which the particular obligatory action is necessary. If so, a man's particular actions should be such as will together make a life in which this goodness can be realized; their "values" are connected with the goodness of the whole; and the synthesis of *Werthelemente* which Hartmann requires in a particular action is really the suiting of the particular action to the wider plan of life to which it belongs, in a situation of a sort that seems sometimes to call for exercise of one and sometimes for exercise of the other of two "opposed" virtues.

It is Plato's teaching that you cannot unexceptionably define any virtue by naming the sort of acts it requires of you. A man's courage should not always make him stand in the ranks and fight, nor his justice always make him restore what he owes. The statement that justice, in the widest sense of that word, will make him do his proper job, τὰ αὐτοῦ πράττειν, may seem open to an objection

¹ Cited by C. M. Williams, *A Review of the Systems of Ethics founded on the Theory of Evolution*, p. 117 (Macmillan, 1893).

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just the contrary of what lies against the attempt to define virtues by naming their works; for while one method assigns to a virtue acts which do not belong to it, the other fails to say what do. Plato tries to meet this objection by describing the life of a good state and the constitution of the soul. By the first description we are helped to divine the particular acts that should be done; by the second to see through the development of what capacities in us and through what inner discipline we may do the acts belonging to us in the life of the state, and not other acts. This discipline and development bear fruit in all right actions, and the "inward and spiritual grace" from which the "outward and visible" deed issues is different because of them from what it would be if the agent were not thus "just," even though the outward and visible deeds might yet be on occasion the same. In that sense, virtue is one; though this unity involves, as Plato is careful to maintain, distinguishable constituent excellences in distinguishable forms or parts (εἶδη or μέρη) of the soul; and though also we may distinguish many virtues, according to the kinds of situation that repeatedly occur and the kinds of deed which for the most part are required in them. But that such deeds are right in such situations is true only for the most part; that is why the virtues cannot be unexceptionably defined by naming the sorts of acts they require of us.

Now Aristotle was more interested in the multiplicity of virtues than in the unity of virtue. To this we owe it that he devoted a book and a half of the *Nicomachean Ethics* to the detailed description of a number of particular moral virtues, and the vices alternative to them in their several fields. These are so many "values" and "dis-values," *Werthe* and *Unwerthe*, in the phrase of Hartmann and other exponents of "axiology." If all these "values" ought to be actualized, are *seinsollend*, and certain situations allow of one's actualizing more than one, but only alternatively, then antithetic relations and "antinomies" arise, and the need for "synthesis." If, however, virtue is one, it should not require of us incompatibles. That is why the synthesis of antithetic "values" which Hartmann finds to be involved in some moral virtue described by Aristotle as a *μεσότης* or mean is only a particular case of what must be always necessary for determining the right act in a given situation, if the unity of virtue is to be sustained against the multiplicity of the particular virtues.

And Aristotle, though more interested in the multiplicity, does not deny that unity, the belief in which led Plato to offer a definition of justice "in the soul" which would make the just man the man of complete moral virtue. Only he will not give to this all-pervading unity the name *justice*. If we ask ourselves whether anything corresponds in the *Nicomachean Ethics* to the Platonic distinction between justice in the state and justice in the soul, we must, I think,

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admit that the distinction between *ὅλη δικαιοσύνη*, complete justice, and *ἠθικὴ ἀρετή*, moral virtue, as the generic identity of the various particular virtues in his table, so corresponds. Aristotle himself really says as much; for justice, in this comprehensive sense, is, he says, not a part of virtue, but the whole, *οὐ μέρος ἀρετῆς ἀλλ' ὅλη ἀρετή*: all virtue is contained in it, as the proverb says; the man thus just has "fulfilled the law."¹ And then, in the last section of the chapter, he gives its relation to moral virtue. They are the same thing differently regarded; *i.e.* what this same is, as justice and as virtue, are not the same; in relation to other men, it is justice; merely as a disposition in the man who is just, it is virtue.²

This is not really different from what Plato had written in the fourth book of his *Republic*, at the end of the passage in which, assuming that we mean the same when we call a state and when we call a man just, he has gone on to analyse the soul, and shown how the three sorts of excellence, whose display by different men holding different functions in the state make the actions just which we regard as corporate acts of the state, enter also into every action of a just man. Therefore they enter—and this, if we are to understand Plato, we must never forget—into those very actions of different men, by which they co-operate in a corporate act of the state. The statesman whose wisdom, the soldier whose courage, the others whose temperance contribute to make a corporate act of the state just, will each make his contribution as he should only because, in so ordering his own soul and his own life that he may do so, he displays all three excellences. The justice of the state, therefore, is an expression of the justice in the souls of those whose several actions are concerned together in what we call the state's acts; for Plato knew that only individuals act. And this is what he says in the passage to which I am referring. "Something of this sort is in truth, it seems, what justice was"—the justice of which he has been so long speaking—"concerned not with the outward doing of one's own duties, but the inward;³ in very truth with a man himself and what is his, that he should not allow the kinds⁴

¹ *Eth. Nic.*, V. i. 12-19.

² *Ibid.*, § 20, 1130^a 10, *τί δὲ διαφέρει ἡ ἀρετὴ καὶ ἡ δικαιοσύνη αὐτῆ, δῆλον ἐκ τῶν εἰρημένων—ἔστι μὲν γὰρ ἡ αὐτὴ, τὸ δ' εἶναι οὐ τὸ αὐτὸ, ἀλλ' ἢ μὲν πρὸς ἑταίρον, δικαιοσύνη, ἢ δὲ τοιάδε ἔστι ἀπλῶς, ἀρετή.*

³ I italicize words supplied in translation, after the manner of the authors of King James's translation of the Bible. The Greek—*οὐ περὶ τὴν ἔξω πράξιν τῶν αὐτοῦ ἀλλὰ περὶ τὴν ἐντὸς*—is ambiguous; for *τῶν αὐτοῦ* may be either one's own duties, or the "parts" of one's own soul; in the next words—*ὡς ἀληθῶς περὶ ἑαυτὸν καὶ τὰ ἑαυτοῦ*—it is the latter; but there is probably a shift of meaning (one might almost say a play upon the words) indicated by *ὡς ἀληθῶς*.

⁴ *γίνη*; *i.e.*, what are also called the *εἶδη*, or *μέρη*, parts, of the soul.

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within his soul to do each another's *work* in him, nor to interfere one with another, but having verily set aright what is his and gained rule himself over himself, having ordered and come to friendship with himself and conciliated *these kinds* in their triplicity, just as if it were three strings in a scale, top and bottom and middle, and any there may be between, having bound all these together and become out of many one, temperate and ordered, so at length should act, if he do some action whether concerned with getting money or with the care of his body or with some affair of state or transaction of private *life*, in all these counting and calling just and noble whatever action preserves and helps to complete in him this disposition, and wisdom the knowledge that presides over this action, and *likewise* unjust whatever action at any time undoes this *disposition*, and folly the opinion presiding over this."¹

Such is Plato's account of the disposition which is virtue, in whatever particular sort of virtuous action and in whatever dealings with others it is shown. Aristotle, in the passage cited above, as often elsewhere, has but put into a succinct phrase or formula what Plato had set out at length. He does the same when he contrasts appetite and purpose, saying that a man's purpose may be contrary to his appetite, but that he cannot have contrary appetites at once.² This statement sums up the result of the argument by which Socrates, in the *Republic*, 436B-439D, convinces Glaucon that what makes it possible for a man to refrain from gratifying an appetite he does not cease to feel, and so to be contrarily affected in himself towards the same thing at the same time, is that there is a rational or considerative as well as an appetitive principle or part or form or kind in his soul. It is of course to similar experiences of contrariety within the soul that Socrates appeals in arguing further for a principle of spirit distinguishable alike from the appetitive and the considerative forms of the soul's being.

It is not necessary here to expound the reasoning by which this account of the soul is commended, nor to discuss the value of the account. All that I wish to do is to consider how Aristotle's definition of moral virtue is related to Plato's definition, based on this account, of "justice in the soul." I have suggested that the most famous feature of Aristotle's definition, the doctrine of the mean, expresses an attempt—I think an ill-advised attempt—to improve upon Plato's account of the part which "temperance" plays in "justice in the soul." I have so far offered reason for saying that anyone looking for Aristotle's treatment of the facts to which Plato directed our attention, when expounding justice in the soul and its

¹ *Rep.*, IV. 443B-444A.

² *Eth. Nic.*, III. ii. 5, 1111^b 15. καὶ προαιρέσει μὲν ἐπιθυμία ἐναντιοῦται, ἐπιθυμία δ' ἐπιθυμίᾳ οὐ.

relation to justice in the state, would expect to find it in the definition of moral virtue, *ἡθικὴ ἀρετή*, and the exposition of the relation of this to *ἁλὴ δικαιοσύνη* or complete justice.

But we cannot judge this question fairly without bearing in mind what Plato never points out in so many words, though the *Republic* contains several definite statements implying it, viz. that the three forms or parts of the soul are not merely co-ordinate: that the division as it were does double duty, and if not a "physical," is anyhow as well a "metaphysical" as a "logical" division. To call them parts suggests that the unity of the soul is by way of addition to an appetitive of the other principles. But the spirited and rational are not merely added to the appetitive, as an appetite for grass might have been added in Nebuchadnezzar to his existing appetites for other foods, instead of being substituted for them. It is itself modified by the presence of the other two, as the spirited also is modified by the presence of the rational. Besides this, in any action they are all involved; to crave, to be angry, or even indignant, to consider or approve, none of these is to act. And the co-operation of them in action—how the soul is at once in some respects the same in all action, in other respects differs according as a man acts more or less justly—this is one-half of Plato's teaching; that we may understand this is one purpose of his division; and so far as the human soul shows its being in all these modes at once, we might call the division metaphysical. But the appetites which Socrates in *Republic*, 436A, describes as for the pleasures of nourishment and procreation and their like, though, if the soul were merely appetitive, they would be the only sort of desire it would feel, are by no means this in fact. Other kinds of desire belong to it as spirited, and yet others as rational. This is most explicitly asserted in IX. 580D. Socrates there offers, as a further proof that a man's soul may be divided according to three "kinds," this: that there are pleasures of three kinds, each proper to one mode of the soul's being, and likewise desires and principles.¹ There are, that is to say, desires that belong to a soul as spirited, and again as rational, not only those which belong to it as appetitive; so that *ἐπιθυμία* has a generic as well as a specific sense, and so far as the soul is an *ἀρχή*, or initiates change, the threefold division is a logical division into three principles in virtue of which it does so.²

¹ *Τήνδε· τριῶν ὄντων τριταὶ καὶ ἡδοναὶ μοι φαίνονται, ἐνὸς ἐκάστου μὲν ἰδίᾳ. ἐπιθυμίᾳ ὡσαύτως τε καὶ ἀρχαί. ἀρχαὶ* here presumably are movers to action; they "take the initiative."

² Aristotle again finds a way of expressing this, by distinguishing in the genus *ὄρεξις* the three species of *βούλησις*, *θυμός* and *ἐπιθυμία*. Vide *De Anima*, γ ix. 432^b 5-6; *Magn. Mor.*, I. xii. 1187^b 38, *ἀρεξέως δ' ἔστιν εἴδη τρία, ἐπιθυμία, θυμός, βούλησις*. When Aristotle says, *De Anima*, γ ix. 432^b 6-7, criticizing Plato for dividing the soul into parts, *εἰ δὲ τρία ἢ ψυχῇ ἐν ἐκάστῳ ἔσται ὄρεξις*, he says what Plato would have readily admitted.

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The importance of all this is as follows: The function of the rational or considerative "part" in the soul is not merely to regulate the appetites, *i.e.* the activities of the appetitive "part," from which, at the outset of his analysis, Socrates proves its distinctness, by calling attention to its withholding a man from the gratification of his appetites. It has to regulate all a man's desires, including those of which it makes him capable itself, like desire of knowledge, and those, like desire of power, whereof the spirited "part" makes him capable. Similarly, the function of the spirited "part" is not only to hold a man steadfast to an approved course when this course involves rejecting the gratification of some appetite, but equally when it involves refusal to gratify a desire of which the spirited "part" itself, or even the rational, makes him capable; for a man may on occasion judge it right, in the interests of the community or of his own soul, that he should sacrifice some pursuit of power or knowledge.

Though it lies aside from my main thesis, it may perhaps be worth while to suggest here that this distinction between the generic and the specific senses of *ἐπιθυμία* might well be borne in mind by Freudian psychologists when they speak of the *libido*. When the direction of a man's energies into some other channel than the gratification of sexual appetite is described as a sublimation of the *libido*, it seems often thought that this appetite is being somehow transformed, say into a devotion to good works. But though such devotion may fill a larger part in the life of a man who has been disappointed in love, or in whom sexual appetite has been repressed, than otherwise it would have done, it is not itself a transformation of the specific appetite, but an alternative manifestation of the generic capacity of desire, and one of which another "form" of the soul than the appetitive makes him capable. To suppose that sublimation of the *libido* is transformation of appetite is like supposing that to draw a circle is to transform a drawing of a triangle.

The soul then, according to Plato's account, as rational or considerative, has at any moment, if it is to act justly, to divine what is best in the situation and act accordingly. But it has in it all sorts of impulses to action, some springing from its appetitive, some from its spirited, some from its rational nature. Any of these may move it towards doing something of which as rational it disapproves, or from doing something of which as rational it approves. What Plato calls courage, the excellence of the spirited "part" as this functions in all action, will sustain him in following his judgment, when thus moved contrarily. But the man of formed and settled "justice" will not be moved by appetite towards that of which "consideration" would never approve pursuit,¹ and his desires for what in suitable circumstances he would approve pursuing, in whichever "part" of

¹ Or, as Plato says, *Rep.*, x. 571B, by *παράνομοι ἐπιθυμίαι*.

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the soul they originate, will not be so strong as to make it difficult for him to hold fast to the course approved by him. To determine, however, what place in the scheme of his life the indulgence of any particular desire, the development of any particular interest, the devotion to any particular occupation, should hold is to determine that scheme; and is the task of his rational nature, of the λογιστικόν. The inclusion in or omission from that scheme of any interest or occupation, the indulgence or disregard of any desire, must be so determined as may make his life the best that it can be; though what this is again cannot be settled without regard to what is best for the community of lives in which his must take its place; and there are of course, as Plato recognizes, certain "necessary" appetites, without whose indulgence the individual cannot live, or the race cannot continue. But some men in some situations ought to reject the indulgence even of these. No rule can be given by which to determine either when their indulgence should be altogether rejected, or how largely any desire, interest, or occupation admitted to have place in the scheme of a man's life should be allowed to bulk there.¹ That is what a man's wisdom, the excellence of his rational or considerative nature, is to enable him to decide, or at least to recognize when a wiser than he has decided it for him. And that his divers desires and interests should be developed in such mutual adjustment and relations of degree as the scheme that his wisdom approves requires is what Plato calls σωφροσύνη, or temperance: an excellence, as he says, not of the appetitive alone but of the whole soul, just because it involves desires or moving powers, ἐπιθυμίας τε καὶ ἀρχαί, belonging to each of its "parts" or "forms."

Now how far does Aristotle recognize all this in his definition of moral virtue? Does he, too, see in moral virtue the union of three sorts of excellence, wisdom, courage, and temperance? It seems to me that he does, but with a profound difference in his view of the last; and this difference is shown in his doctrine of the mean.

He defines moral virtue as a disposition displaying purpose, in a mean relative to the agent and determined by a rule, whereby a wise man would determine it.² That it is a disposition, εἰς, agrees

¹ It will be noted that the question *when* a desire should or should not be indulged is the question *ὅτε δεῖ*, whereas *how largely* is *ὅσον δεῖ*, and only the latter is a question of degree.

² *Eth. Nic.*, II. vi. 15, 1106^b 36. εἰς προαιρετική, ἐν μεσότητι οὖσα τῇ πρὸς ἡμᾶς, ὁρισμένη λόγῳ καὶ ᾧ ἂν ὁ φρονιμὸς ὁρίσκειν. Burnet, taking the mean to be a combination of contrary impulses in the right proportion (as explained above, p. 1), took λόγῳ here to mean ratio, viz. the ratio in which they were combined. But these impulses would themselves be capable of varying in degree of strength, and it is difficult to see how the ratio in which they are to be combined, in order to secure the "mean" required, can be fixed unless the strength of each is first fixed. Yet this strength might in turn

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with Plato's language about justice in the soul, which he speaks of as *ταύτην τὴν ἔξιν*. And in calling it *ἔξις προαιρετική*, a disposition displaying purpose, Aristotle recognizes in it the factor which in justice in the soul Plato called courage, *ἀνδρεία*. For Plato defines this courage as holding fast in everything to a right and lawful opinion concerning what is and is not to be feared.¹ By this he means that the just man, whatever loss or suffering or unpleasantness may threaten him from the course which he approves, will by courage hold fast to the right opinion that these are less terrible than not to do what he approves. And when Aristotle says that moral virtue displays purpose, he means that a virtuous man abides in action by the judgment he has formed after deliberation, *ἐμμένει τοῖς γνωσθεῖσιν*,² whatever there may be moving him to act otherwise, though of course it is not this resoluteness that makes his judgment correct; and thus to abide comes, in his opinion, of courage.

Further, Aristotle assigns a part to wisdom in the constitution of moral virtue, as Plato does in that of justice in the soul. For the mean is determined by a rule, namely, by that whereby the wise man, the *φρονιμός*, would determine it. It is true that a man may be virtuous without being capable of discovering the rule for himself; he may rely on the wisdom of some teacher or confessor; but at least he must have wisdom enough to accept the rule and think

be regarded as involving a combination of contraries in a certain ratio, and so *ad infinitum*. Others have interpreted *λόγος* to mean "reason," i.e. the faculty, *τὸ λογιστικόν* or (as Aristotle calls it) *τὸ λόγον ἔχον*. Apart from the question whether *λόγος* ever means this in Aristotle's writings, it seems a fatal objection to such an interpretation here, that it would make the last six words of the definition redundant. For a fool misuses the same faculty as a wise man uses, when he (the fool) misjudges the mean. Moreover, § 7 of the chapter, 1106^a 36-35, where Aristotle illustrates what he intends by a *μεσότης πρὸς ἡμᾶς*, supports the interpretation "rule"; rules for training, it seems to be meant, would fix limits that an athlete should not overstep in either direction to the amount of food or exercise to be taken; but for particular athletes the precisely right amounts will fall at different points between these limits, and these niceties cannot be fixed by the rule. The late J. Cook Wilson held that *ὁρθὸς λόγος* in Aristotle's *Ethics* meant "right reason"; but Professor J. A. Smith, another eminent Aristotelian, has argued strongly for the interpretation "rule," and I have borrowed the last argument from him.

¹ *Rep.*, IV. 430B. *σωτηρίαν διὰ πάντας δόξης ὁρθῆς τε καὶ νομίμου δεινῶν τε περὶ καὶ μὴ*.

² *Eth. Nic.*, III. ix, 1110^a 31, in the discussion of *ἀνδρεία*; cf. *inter alia*, *ibid.*, VII. ix, where *ἐμμένειν τῇ προαίρεσει*, *ἐμμένειν τοῖς δόξασιν* also occur. The weak or incontinent man, *ὁ ἀκράτης*, under the influence of the desire or impulse of the moment, fails to abide by his resolve or purpose; the virtuous man, in whom it is necessary *τὴν τε λόγον ἀληθῆ εἶναι καὶ τὴν ὁρεῖν ὁρθήν, εἴπερ ἡ προαίρεσις σπονδαία* (*ibid.*, VI. ii. 2, 1138^a 24), will abide by his purpose.

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it correct; ἐμμένειν τοῖς δόξασιν¹ is ἐμμένειν τοῖς αὐτῷ δόξασιν. And in this Aristotle is not differing from Plato, who says that courage is holding fast not knowledge but a right and lawful opinion, δόξα. For very few *know* good and evil; and if a man did really know what is good, he could not, in Plato's belief, voluntarily do what he did not think its attainment required of him; though on this question, which is the question of incontinence or ἀκρασία, Aristotle's view is not so clear. There is indeed a very important difference between Plato and Aristotle regarding the wisdom involved in moral virtue or justice in the soul. For Plato thought that it was the same intellectual excellence as is shown in science or speculative philosophy, whereas Aristotle did not, and consequently drew a distinction, unknown to Platonic usage, between φρόνησις and σοφία. But this difference does not affect the fact that they agree in holding wisdom, an excellence of the λογιστικὸν or λόγον ἔχον μέρος in the soul, to be a factor or moment in what the one calls justice in the soul and the other moral virtue.

There remains the question whether Aristotle recognizes as the third factor or moment "temperance" or σωφροσύνη. And it seems to me that he does so, but takes a different view from Plato's of what this factor is, when he says that this disposition is in a mean relative to the agent, ἐν μεσότητι τῇ πρὸς ἑμᾶς; and also that in this he is not, as I take him to have believed, improving upon, but spoiling the analysis which he follows.

It is, of course, no objection to this conjecture that temperance, σωφροσύνη, figures in Aristotle's table of particular virtues, as one among a number of means or μεσότητες. For it is quite consistent with the unity of virtue implied in Plato's account of justice in the soul that this disposition can show itself in, and give a special character to, some group of a man's actions distinguished by their being concerned with a special kind of appetite or desire, or a special kind of situation. So Aristotle distinguishes one particular virtue from another by reference to what kind of affection or action, πάθος or πράξις, displays the general character of being in a mean. And there is no more difficulty in giving the name σωφροσύνη both to a factor in all virtuous action and to a particular virtue than there is in admitting, as Aristotle does, a distinction between justice as a whole, ὅλη δικαιοσύνη, and particular justice, ἡ κατὰ μέρος δικαιοσύνη. Nor is the double use of the words mere equivocation; it points to a peculiar complexity in the facts.

We saw that, according to Plato, measure or moderation must be imposed on each appetite, interest, and desire; but that in what measure it should work or be indulged in a man's life depended on the plan, or *idea*, of that life as a whole; and that such a dependence

¹ Cf. *supra*, p. 177, n. 2.

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affords no rule by which to determine its measure, or in accordance with which to moderate it. For what life is just for a man can only be known by knowing what pursuits, indulgences, and occupations are to be included in it; since till this is known, the life to be pronounced just or unjust is not before us for judgment. Rules indeed there may be that hold good for the most part; but in the cases where they hold no longer, this is because of what else is required of a man—actions of other kinds than fall under the rule and constitute the field of the particular virtue in question. Such rules therefore are not criteria. The only criterion would be the just life; but what that is cannot be known until we know what ought to be done in the case for which a criterion is sought, and therefore the just life cannot be a criterion.

I conjecture that Aristotle was dissatisfied with this position, as we all may well be, even if the matter really stands so; and that he sought to go further, and show that the matter is susceptible of a more exact treatment than this, though he admitted that the exactness possible in moral questions falls very far short of what is to be demanded in mathematics. To secure this greater exactness or precision, he substituted for the notion that the measure, *μετρίότης*, required in action or indulgence or emotion of any kind is to be determined by reference to the whole scheme of a good life, the notion that it can be determined to a certain place, upon a scale of quantity or degree, on which all actions, indulgences, or emotions of the kind in question must have a place; and he suggested that there may be rules, by help of which we may limit the range upon the scale within which that place falls for the agent concerned. It seemed to him easier to fix the mean by reference to contrary extremes or vices displayable in the same kind of action, indulgence, or emotion than by reference to anything so vague and hard to seize as the form or plan of life to which the required action must belong.

The doctrine of the mean has been often criticized. To one criticism Aristotle himself points out the answer. It does not imply that the difference between virtue and vice is one of degree. Characters not differing among themselves in degree may be grounded in conditions that do differ in degree or quantity, as beauty and ugliness of visible form depend on ratios between the quantities of the several parts of what is beautiful or ugly. It is a more serious objection that the differences in which virtuous and vicious acts are grounded are many of them not of degree or quantity, according to Aristotle's own account. The even-tempered man, or *πρᾶος*, will show anger not only in the right degree, but with the right persons; the generous man will give not only as much as but to whom and when he should. Such conditions fit well enough into Plato's account

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of "temperance," but not into the theory of the mean.¹ Again, even if differences of quantity or degree more pervasively distinguished the "matter" of actions in the mean from those in either extreme than in fact they do, it would be a mistake to think that by directing attention to this Aristotle helps us to discover what is right in a given situation. No doubt if we knew already what was too much or too little, that knowledge would help us towards knowledge of what virtue requires, and the more so, the less difference there was between the excess and the defect. But in fact the knowledge that this would be too much and that too little is often reached through recognizing something else than either to be right or nearly right. And right rules are no better guides because they determine a mean than if they were like the commandments, "Do not kill," "Do not steal," "Do not lie." These hold good for the most part; but our difficulties arise when taking life, or ignoring rights of property, or saying what is false, seems the least evil course in the circumstances; and the rule does not help us to know when it should be broken. So a rule that fixes limits beyond which one should not go in either direction holds good only for the most part; the mean may fall between them for most agents in most situations; but relatively to a particular agent in a particular situation the rule may fail.

For if we consider a virtue that is especially patient of being presented as depending on the degree of certain impulses or *πάθη*, viz. courage, we must admit that there are situations in which the courageous man should avoid all danger, or again none. And we remember the man to whom Jesus said, "Sell all that thou hast." If then the limits between which, when we consider all occasions for a certain sort of action or affection, *πρᾶξις* or *πάθος*,² we must admit that the mean may lie are all and nothing, there is the same range for the virtue which is in the mean and for the vices which are not. We may have rules, as has been said, holding good for the most part, but so much is compatible with Plato's exposition. If we want more, and ask to what we should look, when the rules do not apply. Plato has at least something to say. We should look to what other acts, indulgences, pursuits seem required of us or commendable in our course of life. This will not tell us how to act now; but it will direct our attention to that of which consideration is necessary, if we are to reach a judgment. Aristotle substitutes for this reference to the play which should be allowed in one's life to other impulses, desires and interests a reference to the different possible extents of play that may be allowed to the one whose part is in question;

¹ Cf. *supra* p. 176, n. 1.

² Aristotle says that his *μεσότητες* are *περὶ πάθη καὶ πράξεις*, and the particular virtues differ according to the sort of *πάθη* and *πράξεις* they concern.

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and in consequence he has nothing to say regarding cases where a rule applicable for the most part should not be observed.

And in the *Eudemian Ethics* this is acknowledged: "When a man's action is rightly irregular, it is in the mean; for in a way the extremes fall within the mean."¹ Nothing is now left of the doctrine of the mean, except that there are useful rules of conduct, to be followed for the most part. What was intended, as I believe, to give more precision to that part of the analysis of moral virtue which concerns the description of the "acts and affections," approved by wisdom and sustained by courage, than Plato's account of *σωφροσύνη* gave, has turned out to give less. Indeed, it affords no guidance whatever. For if I were to ask what scope I ought to give in my life to the indulgence of my love of music (say). or travel, it is of some use to be told: Look beyond that activity, and consider what else there is for you to do and enjoy in life, how different determinations of your question will affect the rest of your life, and with which adjustment you think you will be living best. But it is of no use to be told: The degree or extent of scope to be given it must lie in a mean, and the mean lies between giving it none at all, and giving it all possible scope and the first place in your consideration.

For these reasons, while I think that Aristotle in his definition of moral virtue was following and trying to improve upon Plato's analysis of justice in the soul, I also think that by the modification he made in it, viz. by introducing the doctrine of the mean, he in fact largely spoilt it.

¹ III. xiv. 1231^b 4. ὅταν μὲν γὰρ καλῶς ἀνώμαλοι ὦσιν, οἱ μέσοι γίνονται· ἐν τῇ μέσῳ γὰρ ἐστὶ πῶς τὰ ἄκρα.

ITINERARIUM MENTIS IN DEUM

GERALD CATOR

Console thyself, thou wouldst not seek Me hadst thou not found Me.

PASCAL.

Prefatory. The Logic of Theism.—Our world, the thing or complex of things, which is continuous and co-ordinate with our present perception, is self-transcendent. The proof is from observation, from our reactions, which are often more sensitive than our direct observations, from the testimony of philosophers, expert psychologists, and poets (cited in the text).

To say that our world is self-transcendent is to say that it presents itself to our minds as indigent of *some* sort of supplement or complement having *some* sort of ontological status which it implies in *some* capacity.

The problem of the Logic of Theism is the problem of determining, assigning a definite value to, these "somes." In other words, the proof of God is the proof that what "our world implies" when it is made determinate corresponds with the received conception of God in such a way as to justify the substitution of the name God for the indication "what our world implies."

We begin with "what our world implies" as a determinable, and we proceed to determine it, that is to say, to make clear, distinct, and explicit what it is obscurely, confusedly, and implicitly from the first onset. We explore by various methods (see text).

To illustrate my meaning, and only to illustrate my meaning, let me suppose that we are successful in determining that "what our world implies" is (a) as regards ontological status something *existent* (existence, since it was in question, here counts as a determination of the determinable); (b) as regards relation, related to our world as its supreme cause; (c) as regards intrinsic character; endowed with such attributes as omniscience, omnipotence, and perfection; then we should be justified in giving to the determinable "what our world implies" now determined as "something existent, supreme cause of our world, having intelligence, will, and goodness," the name God. We should have proved the existence of God, or should have shown that the existence of God can be inferred from our world. Or rather, I will say that if we proved the existence of a Being in whom the most salient and important features of the received notion of God were realized, we should have proved the existence of God *for all practical purposes*, inserting this limitation because it

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might seem that our determinable still further determined might develop characteristics incompatible with the received notion of God (*e.g.* such a unity as to be *incompatible* with triunity). However it may be with this speculative difficulty, which I do not personally believe to be insuperable, if we could get so far as I have described, then as a matter of practical perplexity and controversy the issue as between Theism and any available alternative construction of reality would be decided.

These prefatory remarks are not intended as a summary of what will be attempted in the body of the paper. They are intended to strip the mystery from the process of proving the existence of God, and to suggest that it consists in the determination of a determinable which in its most indeterminate and obscure form is a given fact of observation.

What a fact, or a complex of facts, implies is a property of it, and belongs to it in its own right, whether or not any mind which is aware of the fact is also aware of the implication.

But when a fact which has implications is present to a mind, then since the fact, so to speak, solicits of the mind the recognition of its implications, and this solicitation, being a sort of action emanating from the fact cannot be entirely inefficacious, there is produced in the mind *at least* an incipient inclination to recognize the implications, and this inclination reflected back by the mind on to the fact which is its origin causes the fact to seem to the mind to be charged with interrogation and surrounded by a sort of aura or fringe of suggestion.

In other language, the fact produces in the mind a state of wonder, and itself seems wonderful. This state is the beginning of reflection.

If there is a God occupying such a position in Reality as monotheistic religion assigns to Him, He will be implied by every fact at least in the capacities of its exemplar, final and efficient cause, and therefore, on the theistic hypothesis, and in accordance with what has been said above about the inclination evoked by implication, every fact will be accompanied by *at least* an incipient reference of itself to God in the above-mentioned capacities, and therefore, correlatively, by an incipient awareness of God as terminating this reference.

By inference I shall mean that spontaneous reaction of the mind by which the given object is enlarged by being recognized as surrounded by a field of implication. This is much less than is ordinarily meant by inference, but I adopt this terminology to introduce my contention that while this first act is ampliative and irreplaceable (since it inducts us into the intelligible world), what follows on it,

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which I shall call the development of the inference or the development, may be carried out in more than one way. In my view the totality which is constituted by the original given object, together with its field of implication, is co-extensive with the universe, and it has a structure such that there is within it a "proper place" for everything nameable. All therefore of what I am calling the development consists in filling in this original schema out of its own implicit resources.

The ways of development are Meditation, Logical Education,¹ and what I will call Dialectical Meditation. Logical education has certain advantages (communicability, recoverability, verifiability), in virtue of which it may be regarded as *primus inter pares*, but it is no more than this. It is one way of doing what may be done otherwise, and not all the advantages are on its side.

Meditation.—This method consists in making the mind sensitive, docile, responsive, to the solicitations of the object, in purifying it and freeing it from diverting and obstructive pre-occupations so that it can take in the messages which things are striving to communicate, the most important and pervasive, though not the most strident and insistent of which is "He made us." This is the way of the Saints, and hence, as Joubert says, "The great Saints are great Metaphysicians." Hence also it is that the clean of heart see God.

Logical Education.—Meditation is a method of becoming aware of the implications of the object by enhancing the intrinsic sensitiveness of the mind. Logical education is a dodge for making the object as if it was more insistent than it is. It does for the mind what a telescope or microscope does for the eye. By logical education the implications of the object are enhanced up to perceptibility level by being apperceived in terms of simpler implications, or, in the ideal limiting case of a perfect logical demonstration, by being apperceived, *via* intermediaries if necessary, in terms of elementary implications which are, for every mind, inseparable from the object. Logical education does for the clear of head what meditation does for the clean of heart.

Dialectical Meditation.—This method has in common with Meditation that it proceeds by intending the mind on the object, and in common with education that it proceeds by steps or stages, but the terms required for these steps are not links but stepping-stones, guides to the mind's eye. Ground is gained a little at a time, consolidated, and then made the basis for a fresh advance. This method can be applied both to the object and to the mind. Suppose I pick up a broken flint and am in doubt whether it is a sport of nature or an artefact, I may be able to resolve my doubt by comparing it, on one side with an undoubted sport, and on the other side with an undoubted

¹ Deduction is a sub-form of education, a way of effecting educations.

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artefact. The comparison, supposing the flint to be really an artefact, will bring out on the one side the absence of the marks of natural origin, and on the other side the presence of the marks of human workmanship. Or again, I may be discontented and restless, but unable to analyse my state of mind until I am led to compare my state of mind with that of St. Augustine, "Thou madest us for Thyself, and our heart is restless until it repose in Thee." *Then I may be able to see in my mind what was there all the time, but what until aided by this comparison I was unable to discriminate.*

Any object which is such as to be capable of supporting an inference, afterwards to be developed by one of the methods already mentioned, must be pregnant with self-transcendence, and as a result of its effort to give expression to this self-transcendence it will be known, clearly or dimly, as in a context, a sort of logical analogue of space, surrounding it. This context is the universal of which the given object is a particular value or instance.

Thus Bosanquet¹ says, 'there is something in a curve as given which is capable of dictating a continuation and completion of its outline.'

Whitehead² speaks of Nature as exhibiting "entwined prehensive unities each suffused with the modal presence of others," and of "the brooding presence of the whole on to its various parts." This modal suffusion of the primary object, this brooding presence of the whole universe in each of its parts, is the character which is the basis of the possibility of inference. Again, Wallace³ says, "All objects of science, all terms of knowledge, lead out of themselves and seek for a resting-point and centre. They are severally inadequate and partial, and crave adequacy and completeness. They tend to organize themselves and to constitute a system or universe."

Professor Stout has made this, to me, all important point, that of the given self-transcendence of the given, *the self-transcendence of the given as a given fact*, specially clear. I will therefore allow myself to quote from him⁴ at some length. "The presentation in asserting itself, also asserts more than its own being. It does not present itself in isolation as something self-complete and self-existent. From the outset it is cognized as part of a system, having its existence only in relation to other parts of the system. The special context to which it belongs may be very vaguely apprehended." "Apart from classification, interpretation, and description, what is immediately given cannot constitute an object of thought at all. It is never an object by itself,

¹ *Logic*, vol. ii, p. 3.

² *Science and the Modern World* (Popular Edition), pp. 104, 108.

³ *Logic of Hegel*.

⁴ *Studies in Philosophy and Psychology*, pp. 300, 310, 373. See also p. 256, and *Analytic Psychology*, vol. i. p. 95 (Implicit and Schematic Apprehension).

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but only as part of a context. We have no means of defining it so as to draw a line of demarcation between it and its implication. This is impossible, because in defining it we must describe or characterize it, and in describing or characterizing it we must include its connection with what is other than itself." "The process through which the parts of the Universe are successively revealed must start from primary objects, which ultimately specify for thought all other objects. These primary objects can be nothing else than those modes of immediate experience which we have call presentations. But this implies not only that presentations are essentially fragmentary, and so related in various ways to being which transcends their own existence, but also that they are *apprehended* as being incomplete, and therefore as related to objects which are not themselves presentations falling within the experience of the moment."¹

The entry on the Itinerarium to God may be an impression in consciousness of an implication of the primary object which in respect of clearness and distinctness is far below the level at which it can be introspectively identified. It may emerge at first only in the form of a vague, rudimentary, spordic aurge.

There is in the *Ingoldsby Legends*--I must surely ask many pardons for introducing such an illustration in such a connection, but I can think of no other equally telling--a recipe for a salad which ends, "some onion atoms lurk within the bowl and unsuspected animate the whole." So I would say that the first rudimentary, subconscious reference to God orients and animates the whole of our mental life.

We may lack something and yet be unaware that we lack anything. Mr. Chesterton² has described the consciousness of the Graeco-Roman world as being haunted by a sense of "the presence of the absence of God." This seems to me convincingly true, but they may well have been unaware, not only of *what* they lacked, but that they lacked anything.

I said to heart,
How goes it?
Heart replied,
Right as a Ribstone Pippin,
But it lied.

BELLOC.

It lied indeed, I should like to gloss, but I may have lied in the most transparent good faith.

Professor James has described vividly the way in which a forgotten name haunts and teases us, "there is a sort of gap in

¹ This ultimate specification by presentations gives the true and acceptable sense of the anti-Platonist slogan, "Nothing is in the intellect which was not previously in the senses."

² *Everlasting Man*, Part I. chap. iv.

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consciousness and in the gap a sort of beckoning wraith of the name." I think that there was in the Pagan consciousness, though at a low level of insistence, a sort of disturbing beckoning wraith of the Self-Same. And all our thinking can ever do is to make the gap relatively definite till it outlines a silhouette. God is ever present to us as ever inaccessible, immanent as transcendent. I have read of a lady named Blanche who suffered from some sort of aphasia which prevented her being able to recall her own name, but she knew it because she could explain, "It's what you do to almonds by scalding them." So with us, the word that solves the riddle of the Universe escapes us, and yet in some sense is pervasively present to us, "*Deo quasi ignoto conjungimur.*"

There is something about our world, a sort of ambience. It presents itself from the first as self-transcendent, instancial, fragmentary. It challenges, solicits, provokes the mind. It will not let us make an inventory of its content of facts and let it go at that. We react to a quite universal and inevitable impression when we speak of an open secret, or of the "Riddle of the Universe"; we do not speak of the riddle of the meaning of a number of weathering marks on a rock surface, but we do speak of the riddle of the meaning of a half-obliterated inscription.

The solicitation of our world on us varies in insistence according to the favourableness of inner and outer conditions. Sometimes it is no more than a perfunctory stirring only just distinguishable from sheer matter of factness, sometimes it needs only just a touch of enhancement to become the successful delivery of an entrusted message, "He made us." The most favourable outer conditions are morning and evening calm, when objects are distinct enough to support thought, and yet the mind is not distracted by a profusion of noonday detail.

Whether or not man is definitely a religious animal, he must be willing to fly in the face of all the facts who will deny that man is a *meta*-physical animal, an animal in whose object-consciousness the natural and physical is impregnated and internally qualified by an awareness of the numinous, the mystical, the supernatural.

If this is not clear from a casual introspection of our ordinary daily business consciousness, all doubt is at once removed if the power of consciousness is a little heightened, say, up to the Wordsworthian level so that it becomes sensitive to the less intrusive exigencies of the object—to those implications emanating from the object which tough-minded realists in philosophy overlook to their irreparable loss.

What I may call the Wordsworthian consciousness may be used as a sort of illustrative middle term to make a bridge between the

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business consciousness and the full-blown theotropic or mystical consciousness.

Who is there who, when his habitual level of consciousness is even only a little heightened, is not aware of "moving about in worlds not realized"? "Obstinate questionings of sense and outward things," "the presence and the power of greatness," "sense sublime of something far more deeply interfused." Is it not true that we do at some moments, our clearest and best, "dimly guess what time in mists confounds."¹

Intensify the business consciousness, that is, make it more responsive to the message of the object, and it becomes Wordsworthian. Repeat the operation on the Wordsworthian consciousness and it becomes theotropic; the diffused awareness of something numinous immersed in nature becomes liberated and concentrated into an awareness of God subsistent in Himself as referred to by nature.² The whole process is a process of condensation or precipitation. Of making explicit the implicit. Of achieving a successful expression of a haunting problematic presence. Something is at first subconsciously active as an urge, then emerges into consciousness as a diffused pervading quality (the numinous), and finally is precipitated as a transcendent, adorable object "present as absent."

Wordsworth's Nature contains God as it were diffused and in solution. The primary object implies, in implying it refers, in referring it refers upwards (the metaphysical is the supernatural). In referring upwards it refers to the absolute goal of its reference. In referring to the absolute goal of its reference it refers to its absolute measure in respect of entity and worth, therefore to a subsistent concentration of reality and perfection, therefore to that which in respect to it (the primary object) is supreme cause of its reality and worth, therefore to its adorable, transcendent Creator; since no other status of the referred to object can give the reference the requisite finality, absoluteness, and uniqueness. We are looking really, though at first unconsciously, for something; then we look consciously. In the adorable, transcendent Creator we find what absorbs every detail of the reference, and is therefore then recognized as its proper object from its first dim beginning.

I remember reading that Carlyle, on being told that one of the New England Transcendentalists had said that she "accepted the Universe," commented, "Gad, she'd better." No doubt this remark of the sage's was rewarded with the looked-for laugh. But really it

¹ *Hound of Heaven*.

² Something like the argument I am here attempting is to be found stated in a masterly way in *The Natural and the Supernatural*, by John Oman. I refer in particular to pp. 134, 136, 138, 169. See also the whole of chap. ix, on "The Individual and Individuality."

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was rather cheap. To accept because resistance is hopeless is not really to accept, and willing acceptance as a duty indicates a prescience of a factor in the Universe which, when it is successfully discriminated, is recognized as Him "in whose will is our peace." It is this same prescience which no doubt is the cause that, as Bosanquet has remarked, none of the major philosophers end on a note of rebellion and defiance, and that, may I add, those minor ones who do so end, strike us as theatrical *poseurs*.

I must apologize if some part of these last pages seems rather headlong and breathless. I will now try to corroborate by way of logical eduction the results reached, and in doing so I shall hope to remove at least some of the obscurities.

Let me call "P implies Q" the inferential complex. This complex is triune because any variation in any one of its three elements entails a sympathetic compensating variation in each of the remaining two. The whole structure of the complex is therefore implicit in each of its elements. In the mode of development which I have hitherto been employing the procedure has been to develop P, the primary object, and, for us, independent variable, of the complex, and to obtain as a result a compensating development of the remainder. Now suppose the initiating wonder to take not the form "What does the World imply?", but the form "What is the relation between the essential world and God?". I say essential because there is yet no question of existence. Both God and the world may be mere floating ideas. The object of the technique called logical eduction is to educate the mind's eye to perceive (if such is in fact the case) that the relation between God and the world is a relation of implication such that if P in the inferential complex is given the value "the World," then Q will receive the value "God." This is like educating the eye to perceive the artefact character of the doubtful flint.

The ideally satisfactory procedure would be to begin with an elementary implication, and to enrich it gradually till it perfectly fitted the case of the world and God. I must content myself with attempting something less, namely, to show that the form of development of an inferential complex is such that it culminates in a reference identifiable in a very crucial characteristic with the form of the reference of the world to God.

An object implies in virtue of its being an instance of a universal. What it implies is primarily that part of the area of the universal which it does not itself occupy. In fact the primary implicate is the "other" of the implicans within the area of the universal. The relation of what implies to what is implied is therefore (a) positive on the basis of the universal, and (b) negative and complementary

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within the universal; but (c), and this reacts on (a) and (b), so long as the mediating universal has any residual character of its own besides its character of relating P and Q, the implication is not a pure case because in these conditions the universal having its own positive character affects the implication and forms, as it were, a matter within which it is immersed. When therefore the implication is perfectly relevant and pure, the whole content of the universal is absorbed into the terms, and therefore the universal as having an independent status vanishes. It is to this vanishing, in the interests of implication, of the universal which is the basis of implication that I wish to call special attention. Orthodox theology, Thomism is the most prominent instance, finds itself committed to what at first sight appear to be intolerable paradoxes, if not open contradictions, in its account of God. It has to say that though the world is relative to God, God is not correlative to the world. This is saying that the relation between P and Q is not a relation between Q and P. God is the Absolute Being. He is not in any class, however general. There is nothing univocally in common between Him and any creature. In all propositions about God the terms have a special appropriated, one might almost say Pickwickian, sense. All our rational equations seem on the point of refusing to work, and of talking nonsense, e.g. the coincidence of opposites.¹ Now I shall try to show that the culminating and limiting case of implication exhibits these same paradoxes so that they prove to be not irrational but essential to any construction of Reality which is a really successful expression of that implication with which the primary object is pregnant from the first.

The following extract from St. Bonaventure's famous treatise, from which, of course, I have taken my title, will serve as an introduction: "The intellect understands signified terms when it understands what each is by definition. But definition is in terms of the superior, and this superior must in turn be defined by its superior until we reach the supremest and most general knowledge which being lacking it is impossible to understand thoroughly the inferiors. Therefore, unless we know the definition of *ens per se* we cannot thoroughly know the definition of any special substance. . . . Being can be known as fractional and complete being. As imperfect and perfect being, as being in potency and being in act, as *secundum quid* and *simpliciter* as in part and totally, as transient and abiding, as *per aliud* and as *per se*, as mixed with non-being and as pure, as dependent and absolute, as posterior and prior, as mutable and immutable, as simple and as composite. And as privations and defects can only be known in terms of the correlative perfections, our intellect cannot

¹ This is specially emphasized in *S. Thomas D'Aquin*, by Père Sestillanges, O.P., by which I have been much influenced, partly by way of suggestion, partly by way of reaction (see vol. i, pp. 142, 162, 182, 189, 275).

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fully understand any created being unless in relation to understanding of the most pure, most actual, most complete and absolute being, which is simple and eternal being, and in whose purity are the ideas of all things" (*Itinerarium*, Cap. III).¹

The primary object implies in two dimensions. First, it implies, laterally so to speak, other possible primary objects on a level with itself in respect of ontological status, and which together with it make up the finite world of which it is a member; second, as a representative of this world it implies in the direction of the non-transfinite. This second dimension of implication is the direction in which the implication of God is to be looked for, and is the only one which will concern us. The correlates in the first direction may be called co-ordinate correlates of the primary object, the correlate in the second direction is the unity which is correlative to the multiplicity of the actual and co-ordinate possible primary objects, it is therefore universal in comparison with the primary object and as universal superior and dominant. The more clearly its implication is perceived the more it tends to become separate and subsistent as well as dominant. The universal idea is a tendentious surrogate for the universal cause. I shall call it at first the superior correlate.

Now take the world as implying merely, if we like, as a fact in the phenomenology of mind, such a superior correlate. If this correlate has anything univocally in common with the world, then this correlate and the world form a second multiplicity which again bespeaks as its correlate a second unity of a yet higher order. If we can significantly say God *and* the world, additively, a unity of this multiplicity is implied which will be intensively and in unity the counterpart of what God *and* the World is extensively and in multiplicity. Now I do not propose to say "this cannot go on to infinity," because so far as the abstract serial form is concerned it may be equally true that it cannot do anything else either, and we shall have arrived at an impasse. But this series has direction (orientation), it is therefore part of its internal and positive meaning that it *refers to*. A reference to nothing is no reference. A reference of which the finite is the basis is *ipso facto*, and as a matter of description a reference of which the transfinite is the goal. The finite does as a matter of description carry this transfinite reference, whatever the interpretation may be, therefore it can. From fact to possibility the inference is valid. What is actual cannot be impossible. I think that those who deny this transfinite reference are either uncultivated in respect to the appreciation of implication, or are blinded by a theory to a plain fact. The most plausible way of escape is to allow the term of this

¹ It is evident from these antitheses that Spearman's third neogenetic principle, the Eduction of Correlates, was thoroughly familiar to St. Bonaventure.

transfinite reference only a formal, or *als ob* or *focus imaginarius* status. My answer to this way of escape I can best put in the form of a criticism of Kant. This criticism has been suggested to me by reading Norman Kemp Smith's *Commentary on the Critique of Pure Reason*. Its essence is that these are two tendencies in Kant, a sceptical and an idealist, and that one or the other must have its way entirely. Kant was convinced by the history of metaphysics that no science of metaphysics was possible; he was also convinced by the history of natural science that this is possible (for it is actually in being). Being then convinced, or all but convinced, of the fact, he was not too exacting when he found what seemed like a theory which seemed to place the boundary of the knowable in about the right place. That is so as to include Science, which has no enemies; and to exclude Theology, which has no friends. I say "what seemed a theory," because to limit knowledge to the sphere of possible experience is merely to limit it to objects which in some undefined respect are like material things, and I cannot see that this limitation need exclude anything in heaven or on earth. If an electron is includable, why not an angel.

If Kant's sceptical tendency had had its way he would have professed a solipsism of the specious present, or less than that; he would have allowed only *als ob* reality to other human minds (are these objects of possible experience?) to all the absent in space, and to all the past in time. He would have said that the historical reality of Queen Elizabeth consists in the present being "as if" she had preceded it. I knew a priest who used to say that Adam might have been created with a half-digested pork chop from last night's dinner in his stomach. I suppose the wine of Cana of Galilee had a specious past, and that some local connoisseur may have rolled it round his tongue and identified the vintage.¹

So far, then, for Kant's sceptical tendency. Now as to his rationalist or idealist tendency. If this had had its way, he would have made the ideas and then the Ideal of Reason dominate and measure the sensible world. He would have allowed the sensible world such reality so conditioned as the ideas prescribe for it, and *not conversely*.²

¹ It is, says my authority, "... not as having existed in itself, that even the immemorial past course of the world can be represented as real ... a similar interpretation has to be given to all propositions which assert the present reality of that which has never been actually experienced" (*Commentary*, p. 503). The passages from Kant which are quoted in support are from the *Antimony of Pure Reason*, sec. vi (Kemp Smith's translation of the *Critique of Pure Reason*, p. 442, Kant, A 496, B 524).

² Our awareness of the conditioned as being conditioned presupposes, over and above the categories, an antecedent awareness of Ideal standards; and to that latter more fundamental form of consciousness all our criteria of truth and reality are ultimately due" (*Commentary*, p. 416). I wish to reiterate that I do not advance this as a substantive criticism of Kant. I am not competent.

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Of the two apparent options open to Kant, one, the sceptical, is really self-negating. If we follow the second way to the end we have to crown it *vi formae* by positing the inaccessible and indispensable Ideal of Reason, first as exemplar cause of the whole realm of essences, the absolute and separate unity of all multiplicity. The universal to become definite must become substantial and separate, (see Stout, *op. cit.*, p. 218), but to get what we want as we want it we should have to pass the off scale of being *at the upper end*. God therefore is known as unknown, present as absent, immanent as transcendent, satisfying as baffling, intimate as ultimate baffling.

Then, since however long we go on determining this world of essences, beginning from a mere schema and tending towards concreteness, we can never in this way clothe it with actual existence, and since actual existence is given as a fact (and is also implied as the ideal limit of fully determined essence), we have to endow the Ideal of Reason with a function corresponding to the bestowal of actuality on the inherently only possible. This function in an intelligence, and a subsistent intelligible is self-intelligible, is causality through will. The Ideal of Reason as the seat of efficient causality is therefore actual. God as the *total* cause of beings which are not capable of entering into an additive relation to Him is Absolute Being, Creator *ex nihilo*. Grand Separé, Ganz Andere, Cor Cordium. A monistic construction of reality is impossible because it does not allow of a successful expression of the negativity which is indubitably there. A dualistic construction denies the indispensable absoluteness of the Absolute. Theism is able to do justice to the finite and to the infinite, to provide, as it were, a proper place for each so that neither have finite things to be depressed into appearances or illusions in the interest of the integrity of the Absolute, nor has the Absolute to be dissipated to maintain the reality of appearances.

The status of creaturehood solves an otherwise insoluble philosophical riddle. The creature is no *other* to God, and thus dualism is avoided. The creature is not nothing, and thus acosmism is escaped.¹

But I have as a convenient device presented my ideas in the form of a criticism which, as a criticism, may or may not hit the mark. My main point is that if we are to respect reason at all we must go all the way with it, and must let it and it alone prescribe its limits. Either we must surrender ourselves unreservedly to the implication of the primary object and take what it gives to us as the standard and not as the subject of judgment, or else we must deny it from the beginning, and then, except as a result of inconsequence, we shall have no available beginning to deny it from.

¹ Two criticisms of Bradley's *Appearance and Reality* show what a difficulty he had in dealing with Appearances which he was not willing to substantiate into Creatures. Professor Pringle-Pattison in an early review illustrated Bradley's treatment of Appearances by quoting from Tacitus, "they make a solitude and call it peace." Mr. Schiller gave one of his anti-absolutist gibes the title, "On preserving Appearances."

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I am aware of the danger that, in this last part, I may appear to some to have been indulging in sterile logic-chopping. Let me therefore in conclusion sum up so as to try to show that the logical interest of the last part is continuous with the religious interest of the first part. (1) What the primary object implies is inseparable from what it is. (2) The primary object objectively and solicitously, though not in the early stages as a matter of subjective appreciation, implies God in such and such capacities, (3) It is impossible to produce a fully satisfying description of the primary object, one which expresses it intimately, except by making patent the tension of implication which is latent in it. (4) There are three techniques for releasing this implication. In all of them the mind and the effect form a conservative system, and assistance from without, though indispensable, is purely ministerial and obstetric. (5) What logical eduction yields is an abstract or extract of the more massive and polydimensional satisfaction which is yielded by meditation.

The whole personality of the Saint is the vehicle of a development which is reproduced schematically in the intelligence of the Philosopher

KANT'S ETHICAL FORMALISM

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THE generally accepted interpretation of Kant's formula "act only on that maxim which thou canst at the same time will to be a universal law," is roughly as follows:—

Our moral experience is fundamentally a consciousness of the difference between Duty and Inclination, between "doing what we ought to whether we like to or not, and doing merely what we like whether we ought to or not."¹ When we have open to our choice different acts, there are some which we would like to do, others we would not like to do, and perhaps others towards which we are indifferent; or we like to do any one of them, or we may dislike all, or we may be indifferent to all. But we must ignore our inclinations, our aversions, our attractions, and our indifferences. We must ask ourselves which of the acts open to our choice *ought* we to do, no matter what our feelings in the matter may be. But how are we to know what act we *ought* to do? Since our inclinations are no guide to what we *ought* to do, i.e. no guide to what our duty is, we must derive our knowledge of what our duty is from reason. It is the function of reason to concern itself with law. In the sciences reason tries to discover the laws which connect together all phenomena; in the sphere of human action, the function of reason is to prescribe law in accordance with which man ought to conduct his life. But what law of conduct does reason as the source of our moral guidance tell us to conform to? All men ought to do their duty, therefore all men can; and if they all can, then all must know what their duty is. Duty must therefore be a law which is known by all. The only law which can be known by all is the abstract form of law, or the general nature of law itself. The general nature of law is that it holds universally. We ought only to do that act which we can will to be a universal law.

Furthermore, Kant's distinction between the motives of our acts and their consequences is understood somewhat as follows: The consequences of our acts consist in those concrete values which are related to human needs. If I tell the truth, I satisfy someone's need to know; if I give away a loaf of bread, I satisfy someone's need to eat. But the concrete values should never be the motives of my act. Even if my act will secure some particular good thing for others, or even for all mankind, such as health, for example,

¹ Professor Hoernlé's lecture notes quoted from memory.

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the securing of this particular good thing should never be the reason why I act as I do. In other words, when I select out a particular act as one I ought to do, my reason for selecting it should never be that it will make anyone wiser, or healthier, or happier. I must ignore whatever consequences my act may have. My sole reason for selecting out any particular act as my duty should be that it is intrinsically capable of being conceived of us a universal law; as an embodiment of the principle that what I conceive of as obligatory for me, I must be able to conceive of as obligatory for all, no matter what results from fulfilling such an obligation. Reason demands of all men conformity to the same laws, not because such conformity would increase human happiness, but because conformity is an end in itself. All men should, *qua* moral beings, be treated alike, irrespective of what effect such-like treatment will have upon our human needs and desires, because such-like treatment is an end in itself. I cannot secure this like treatment, but I can at any rate do that which would be required of me if such-like treatment were established. My motive would be "like treatment for all as an end in itself"—treatment not to be considered with reference to its consequences.

Finally, the object of Kant's examples in which he illustrates the application of his moral formula is usually taken to be this, viz., to show how, independently of social traditions or moral upbringing, we can pick out from all the possible actions open to our choice those which alone could be moral duties for anybody. If this conventional interpretation of Kant's theory be correct, then Kant's ethics is ludicrous. In order to make sense of Kant's theory I feel compelled to give it a fresh interpretation and to criticize his commentators.

My objection to the conventional interpretations and criticisms of Kant's formula is that they are preoccupied with its value as a practical guide, and that they misunderstand the kind of guidance Kant meant his formula to afford. This misunderstanding is due to a misunderstanding of his formalism as expressed in his dictum, and illustrated in his examples.

The aim of this article is to show that the primary aim of Kant's formula and of his examples is not to provide us with a rule of thumb which can be the sole and complete guide of our conduct, but to express scientifically the essence of morality and to illustrate its nature.

I shall show what kind of guidance Kant's formulistic conception of duty *can* give. I shall then show that if we believe in an absolute standard of duty, unvarying and alike for all, we can yet maintain that different individuals and different peoples might have their own ideas as to what their particular duties are, and yet all alike

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be moral if they act in accordance with their consciences. Finally, we shall suggest why, and in what sense, Kant believed that if we listen to our consciences we must all necessarily come to recognize the same duties.

Every act may be viewed from two standpoints: (a) from the standpoint of the particular changes the act is intended to effect and the part these changes might possibly play in promoting the good of humanity; (b) from the standpoint of the impartiality and disinterestedness with which the act is undertaken, i.e. from the standpoint of the principle. We must therefore apply two standards in judging the worth of an act: (a) how far will what we intend to do promote the good of mankind; (b) did we honestly believe that our act would help to make human life better and happier, and is this why we undertook it, or did we undertake the act because it suited ourselves or because it might benefit someone in whose favour we happen to be prejudiced? These two standpoints are not identical. The first will vary with different individuals according to their insight into what constitutes the true good of mankind. The second standpoint is absolute. Did the agent ignore the effects his act might have upon himself, or upon those whom his feelings tend to favour, and did he judge, well or ill, from an impartial point of view that the changes he intended to effect would really be good for mankind? Judged by the effects an act really has upon the happiness of mankind, it may be worthless. But judged from the standpoint of the man's will to promote the good of mankind, the act may be morally good.

When Kant applies the test of consistency he really means "Is the act I intend to do consistent with my nature as a reasonable and therefore an impartial being?" If I am to act morally, then reason and not my likes and dislikes should be the motive of my conduct. The function of Reason is to take an objective standpoint. If we are to act consistently with our nature as rational beings, we must not measure the value of an act and judge its right to be effected by its appeal to our feelings, prejudices, and self-interest. We must transcend the subjective point of view and try to discover if an act is really worth while doing whether we like it or not. Although we ignore our likes and dislikes and our prejudices, our reason may fail to come to a true decision as to what is objectively the best, but we can, at any rate, be impartial, according to our lights and therefore reasonable. A reasonable man may have a very imperfect conception of what is best for the welfare of mankind, but he may know when he is reasonable and impartial, and this reasonableness is the most important element of man's true good. To make mistakes is not inconsistent with our nature as rational creatures, but to put our own interests or those of our favourites first is. There is

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no absolute standard by means of which we can test whether any action is, under the circumstances, the best suited to improve human life. But there may be an absolute standard of reasonableness or impartiality. All men may know what reasonableness is, and be able to attain to it, and reasonableness may be the same whenever found, although it may find expression in different acts and may be variously enlightened as to what are the best acts in which to display itself. Can we state clearly the essence of reasonableness or impartiality so that we may test whether or not we have acted in a spirit of reasonableness, quite apart from the question, "Is what we have actually done really going to improve human life?" Of course, if we are reasonable we will try to find out if what we propose to do is really going to improve life, and our criterion of reasonableness must be able to test if we have really done our best to find out; but our moral criterion cannot tell us whether what we think best really is so. With these preliminary remarks we may turn to Kant's conception of the essence of morality as expressed in the formula, "act only on that maxim, etc.," and try to show that *Kant intended this formula as a criterion of reasonableness; as a test of our principles and not as a rule of thumb by means of which we can without fail single out those acts which alone can be an expression of the good will.*

Kant's formula merely attempts to make precise that minimum amount of knowledge which is possessed *a priori* by every rational being, and enables him to live a moral life. To be moral we must be fair and square in our dealings; we must genuinely *judge* what is the best we can do, instead of doing what we want to and finding moral excuses for it afterwards. In a word, we must act in accordance with the spirit of reason. Now Kant holds that we cannot be acting reasonably and impartially unless we are willing that, what we propose to do, should become a universal law. By asking ourselves, "Can I will that this act should become a universal law?" we rise to the rational plane; we examine an act from a *universal* or impartial standpoint. If I really believe an act is supremely good, then I would be only too glad to see it become a general practice, *i.e.* a universal law. If I am unwilling that my act become a universal law, it means that I do not really believe the act is good for all, but good only for me or from my point of view, *i.e.* only subjectively and not objectively good. By applying Kant's formula then we can test whether we have really *judged* the value of what we have purposed to do, from an impartial point of view. The rejoinder which most readily suggests itself is this: It is our duty to do the best *under the circumstances*; but that does not mean that if we judge a particular line of action to be the best in the circumstances, we must be able to wish that everybody would do likewise at all times; for under different circumstances the act will have a different value.

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But, as we shall see later on, this criticism has force only if we think of the act in a very specific way. When Kant says we must be able to universalize our acts, he is thinking of those acts which are always a means to some ultimate end which all recognize as good, or of the quite general act of promoting the ultimate end. The acts which we cannot universalize, and which we may nevertheless feel morally obliged to do, Kant regards as variable means. For the time being it is sufficient to mention this point, as it will be discussed in full later on.

To sum up: May Kant not really have meant, though he does not explicitly say so, that the changes we will to effect are objectively good or bad? They cannot be both (it is possible, of course, that part of the changes may be good, and part bad), and that an act is morally right if it is directed towards the disinterested promotion of what appears to us to be the greatest amount of objective good. If we are aiming at the disinterested promotion of what we really believe to be the greatest amount of objective good, we would will that all aimed at the same objective good we are trying to promote. The rightness of our act is affected neither by the value of the results which do actually follow nor by the soundness of our judgment with regard to what we believe to be the greatest amount of objective good. Is there not underlying Kant's theory an extremely objectivistic theory of value, viz., that if we judge an act to be the best possible, we must believe that it is best for all to do it? If I really believe an object is square, I must believe it is square not merely for me, but for all; it is the same with regard to objective values. If we would not wish to see others do as we are doing, it means that we really think that our act had better be excluded from human conduct; this is tantamount to believing that the act is really bad, but we propose to do it because it happens to suit us or those in whose favour we are prejudiced.

But the willingness to promote the good impartially cannot by itself tell us what is good and worth promoting. Whence do we derive the conception of a good the willingness to promote which, disinterestedly and impartially, constitutes our moral goodness? Certain possible acts must first of all suggest themselves to us. These suggestions come from our various needs and experiences through which certain ends come to appear worth while. We require experience and that employment of reason in which it compares and correlates in order to arrive at the conception of values in relation to which we must take up an objective point of view. There is nothing in Kant's formula against his holding that our choices will vary with our experiences and our powers of comparing and correlating one value with another. But we cannot judge how good or bad a man is from the *moral point of view* by

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what he *believes* to be the best he can do, or by what he achieves. All that we are entitled to extract from Kant's formula, so far, is that it cannot be morally right to aim at any ideal unless we can uphold it as an ideal for all. If we recognize an ideal as worthy of being realized, we should regard its realization as an obligation to be adhered to, and not sneak out of the obligation when it happens to inconvenience us or our friends. This would be putting our own convenience or that of our friends first, which is unfair and therefore immoral.

If we now turn to Kant's examples we shall see how readily they yield to the interpretation suggested in this article, and we shall understand why he seems to apply his formula, quite arbitrarily, in a negative way. However mistaken Kant may be in his notion of what constitutes impartiality, however mistaken he may be in his adherence to an extreme objectivistic theory of values, and however confused he becomes when he tends to regard the objective attitude itself as the only objective value, the function of his examples is to bring out the contrast between being biased or irrational, which is the essence of immorality, and being impartial or reasonable, which is the essence of morality; a contrast we often hide from ourselves both when selfishness inclines us to act contrary to what conscience or impartiality commands, and also when it does not.

The reason why Kant does not show the positive application of his formula is that his examples presuppose this application. His examples are instances of obligations we recognize, but from which we propose to exempt ourselves because they press heavily on us. Kant then proceeds to show that this exempting ourselves is immoral because motivated by partisanship, as may be shown by applying the test of impartiality.

Immorality implies a recognition of what, from an impartial point of view, appears to us to be right and a resolve to do something else. This exempting of ourselves, so Kant believed, means that we shut our ears to the voice of reason and give way to a weakness we have for ourselves or for our favourites. We recognize the obligation to be impartial and yet act from partisan motives. The incompatibility is between two different motives. But motives are the inner aspect of conduct and do not disclose themselves unmistakably in our acts. A tradesman may believe that it is a duty to be honest, but at the same time he himself may be honest because it happens to prosper his business. A selfish act may, from an external point of view, be the same as that which our conscience requires of us. It is from the inner side, from the point of view of motives, that the two are opposed. But the opposition cannot be illustrated forcefully when both motives lead to the same act. On the other

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hand, if what selfishness inclines us to do is opposed to what our conscience requires of us, then it is easier to illustrate the incompatibility between impartiality and favouritism, justice and injustice; an incompatibility we try to hide from ourselves because if we see it we are in a dilemma: Either we may uphold our dignity as a moral being by fulfilling our obligation and sacrificing a cherished wish, or we may satisfy our selfish wish at the expense of our moral integrity. Suppose our hypothetical tradesman who recognizes honesty as a moral obligation, but fulfils his obligation from selfish motives, finds that he is being ruined, but can save himself by dishonesty. If now he decides to cheat because he thinks that under the circumstances he is justified in exempting himself from the obligation to be honest, we can show that he is acting contrary to the spirit of impartiality, which must be wrong if impartiality is right. In this way we can illustrate the incompatibility between the two motives of all human conduct, favouritism, which to Kant is always favouritism towards oneself, and impartiality. Our tradesman, as an impartial judge, believes that all men ought to be honest, and yet shirks the common obligation when it happens to be troublesome to him. His conscience is opposed to his actual conduct. But he will probably not only shirk the obligation he recognizes, he will probably say to himself, "I recognize the obligation to be honest, but under the circumstances I feel justified in exempting myself." There will then be a contradiction in the man's soul. A contradiction is always a sign of falsity, and the falsity here is moral evil; a "lie in the soul." The man is moved by two contradictory motives, neither of which he can whole-heartedly surrender. But that he has acted from a partisan motive, and has therefore really surrendered the moral principle to which he has paid only lip service, may be shown as follows: Would he be willing to see cheating become a general practice? Certainly not if he is proposing to cheat from selfish motives. For then he puts his interests first, and he cannot at the same time be willing that others should try to hinder him in his selfish purpose, by cheating in favour of *their* interests. His motive will not stand the test of impartiality, and must therefore be selfish. We cannot be impartial in our selfishness. If it is right for me to be selfish, then it must be right for all. But this is a self-contradictory proposition, for if my interests come first, the interest of others cannot also be first.

Kant's theory, as far as we have examined it, does not necessarily imply that every man who wills to do good must arrive at the same judgment with regard to what in particular ought to be done. A complete ethical theory ought to show as far as possible who the good will may enlighten itself with regard to the end it ought to promote. But this problem belongs rather to applied Ethics

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than to the metaphysical basis of Ethics. The *Critique of Pure Reason* shows that our scientific knowledge is based on the Causal Principle, and tries to justify the validity of this principle. The causal principle cannot tell us what the particular cause is of any particular event, and it is not the business of pure logic to show how we can get a content for our empty form, "Every event must have a cause." But at any rate we cannot suppose a set of conditions as the cause of an event, if such a supposition is directly inconsistent with the causal principle. For example, if the conditions are found to be absent while the event is present, it would be nonsense to speak of them as the cause of the event, saying that sometimes they are the cause and sometimes not. This amounts to a denial of the causal principle. Similarly, it is not the business of a treatise on the "Fundamental Principles of the Metaphysics of Morals" to point out what ends a reasonable man ought to promote. We can no more state dogmatically what conditions are best suited for the promotion of man's complete good than we can say with absolute certainty what the particular causes of particular events must be. In the *Metaphysics of Ethics* we are dealing with the nature and justification of first principles, viz. the *a priori* principle of conduct considered in abstraction from the particulars to which it has to be applied. Our loyalty to this principle, which constitutes our moral goodness, does not vary with the various applications of the principle. Furthermore, this purely formal principle does not leave us without *all* specific guidance, for in a sense the command "Be impartial" does tell us what to do. It prescribes one act at least which is obligatory upon all, namely, "Be reasonable and not prejudiced in whatever you do." This is in itself an act. It is that inner decision of the will for which we are ourselves entirely responsible, because we do not depend on experience to teach us what this act of good will is, nor how to do it. Nor does this act change, however much, with increasing knowledge and experience, the channels in which the good will issues may change. This guiding of the good will is the variable element in the moral life, and depends on factors other than the good will itself. Now while admitting that the absoluteness of dutifulness is compatible with different opinions as to what our particular duties are, we might nevertheless argue that there will be a tendency to recognize common moral obligations.

We will come to a working agreement about certain ends, and therefore about certain general laws which will on the whole secure the promotion of those ends. It may be that of no law can we say that it ought to hold always. But law there must be. We can but frame such laws as appear best to our limited wisdom and abide by them. If someone should think that the generally recognized

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body of laws is bad, that does not mean he should be allowed to make a change which from an impartial point of view he believes to be good, if the laws forbid the change. His impartiality would be a mistaken one, he would be favouring his own judgment; nor would he be impartial if he forced on others a change which he alone wanted, even though he believed it to be one which ought ultimately to be made, *e.g.*, if he lived in a country in which people had conscientious objections to giving children sex instruction, he would not be justified in instructing all children he came in contact with, no matter how much he realized what harm is caused by being secretive about sex. He would at most have the right to persuade others to his point of view, and thus perhaps be instrumental in bringing about a new general agreement.

While then the formal commandment to be impartial need not lead to absolutely uniform and unchanging laws everywhere, yet in so far as men obey the commandment it does tend towards some uniformity. Even where we have different societies obeying different laws, there will be a tendency towards uniformity. Different societies are bound to come into contact with each other, and under the repeated urgings of conscience the members of the different groups will recognize each other as moral beings. Their sense of duty or impartiality will lead to co-operation for the formation of general laws for all.

On the other hand, we must remember that all that our formal moral principle can tell us is the spirit in which we must conduct our lives, it does not and need not by itself tell us what in particular we must do. We have all of us to be guided by experience as embodied in the social traditions into which we are born. It is highly improbable that Kant meant that his formula was a means by which any individual could, on his own initiative, draw up his own moral code for the guidance of his conduct. But this limitation of conscience to the merely formal injunction "Be impartial" is no defect as far as morality is concerned. The *a priori* conception of duty may be an infallible guide to the moral aspect of our lives, though not a complete guide to the whole of life. It can tell us in what spirit we must act, but not what acts we must do. However changing and defective our knowledge may be with respect to what acts we ought to do, it is not defective with respect to the spirit in which we should do them.

We may interpret Kant then in such a way as to allow for the absoluteness of the obligation to be dutiful, without denying that man's opinions as to what in particular ought to be considered obligations may vary and improve, and without justifying moral anarchy on the grounds of the relativity of moral ideas. But why then did Kant insist that we must all *necessarily* recognize the same

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moral obligations, if he did insist on this? We have shown how on Kant's theory we can explain a tendency to uniformity, but no more than a tendency, which in fact has not resulted in complete uniformity of social codes. But why, or rather let us ask, in what sense does Kant believe that every conscience which is honest with itself must recognize the same moral laws?

The first line of thought is somewhat as follows: We should select as duties and make obligatory those acts which are absolutely necessary for the promotion of that ultimate end which we all recognize as indisputably good, *e.g.* human happiness. But, it would seem, if acts are to be selected only in so far as they promote certain ends, such acts cannot be made into rigid laws, because the exact repetition of an act which at one time secures the required end may quite fail to do so when circumstances have changed. We may, however, avoid the difficulty, if we take our act abstractly enough, *e.g.* promote the happiness of mankind. Such an abstract law allows of a great variety of different acts, all of the same general type in that they are all directed to the same end. In fact, our duties will be expressed in terms of general ends (those ends which are ingredients of happiness) rather than in terms of either particular acts or general types of acts. The different acts which are required at different times for the promotion of happiness may be regarded as means to happiness, although they are really the changing constituents of happiness. We might then say that it is the means (*i.e.* our particular duties) which are relative, but the ultimate end and the moral obligation to promote it is absolute. These means are hypothetical imperatives, their imperativeness is conditioned by the Categorical Imperative of Duty which we may now express in terms of an end, namely "promote human happiness." What we shall consider as means will be conditioned by our circumstances and knowledge, so that our particular duties are conditioned both with respect to their content and to their obligatoriness. But through these changing means we express our dutifulness, our will to promote happiness; this will is an absolute good, an end in itself, apart from the happiness which it may or may not succeed in promoting.

In support of this interpretation of Kant's thought, the following extract may be given from his *Metaphysical Elements of Ethics*, Section III, Of the Reason for Conceiving an End which is also a Duty. (Abbot's Translation, page 295.)

"An *end* is an *object* of the free elective will, the idea of which determines this will to an action by which the object is produced. Accordingly every action has its end. . . . Now since this act which determines an end is a practical principle which commands not the means (therefore not conditionally), but the end in itself (therefore unconditionally), hence it is a

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categorical imperative of pure practical reason, and one therefore which combines a *concept of duty* with that of an end in general.

"Now there must be such an end and a categorical imperative corresponding to it. For since there are free actions there must also be ends to which, as an object, those actions are directed. Among these ends there must also be some which are at the same time (that is by that very notion) duties. For if there were none such, then since no actions can be without an end, all ends which practical reason might have would be valid only as a means to other ends, and a categorical imperative would be impossible; a supposition which destroys all moral philosophy.

"Here, therefore, we treat not of ends which man actually *makes* to himself in accordance with the sensible impulses of his nature, but of objects of the free elective will under its own laws—objects which he *ought to make his end*."

What are the Ends which are also Duties? They are: our own Perfection; the Happiness of Others. Kant then goes on to point out that we cannot invert these and claim that it is also our duty to promote our own happiness and the perfection of others. Duty implies constraint, and we cannot force ourselves to promote our own happiness, for we are naturally inclined to do so; then again it is impossible to promote the perfection of others because this perfection is an end which they must choose of their own accord. This point, however, does not concern us here. The passage quoted is in agreement with Hume's statement that "no act is virtuous or morally good unless there be in human nature some motive to produce it distinct from the sense of its morality," a statement which *does* imply, even though it does not emphasize it, that "the sense of its morality" should form part of the total motive. Kant would of course have insisted on emphasizing "the sense of its morality." We should promote the happiness of others because this happiness is a good which ought to be. On the other hand it is not the only good; the disinterested *will* to promote happiness impartially is itself a good, and the making of this act of will is of more value than the happiness it might foster.

Kant does, however, insist that there are certain acts much more specific than the very general act "promote the happiness of others," which duty requires of us, *e.g.* telling the truth. But he does so insist because he regards such specific acts as necessary means to happiness, and therefore necessarily required of all men who *will* to promote the happiness of mankind. Telling the truth is good because it is always a means to happiness; it is therefore a particular embodiment of the *will* to do good which cannot be varied. In his article "On a Supposed Right to Tell Lies from Benevolent Motives," Kant writes that if I tell a lie to save the life of an innocent man from a murderer, then though I may be doing no wrong to the murderer, and I am benefiting the innocent man, yet by making a false statement . . . I do wrong to mankind in general in the

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most essential point of duty, for I wilfully cause, so far as it lies in my power . . . that declarations in general find no credit, and hence that all rights founded on contract should lose their force, and this is a wrong which is done to mankind. A lie . . . always injures another; if not another individual, yet mankind generally, since it vitiates the foundations of justice, upon which, we may add, the happiness of mankind depends. My duty to tell the truth may conflict with my duty to promote the happiness of others, because I am considering the happiness of only a limited number. If I take a long enough view, then it may become apparent that strict veracity is a *sine qua non* of the happiness of mankind in general.

What justification has Kant for assuming that we know *a priori* any end which is also a duty; that there is any end which by its very notion must be a duty? Then again can Kant really prove that the particular acts which he chooses and regards as invariable means to these ends are always so, and that these different means will never conflict? These questions may legitimately be raised, but they are irrelevant to this paper.

In conclusion we may trace another line of thought which underlies the "Fundamental Principles of the Metaphysics of Morals." In the "Fundamental Principles," Kant tends to regard impartiality, the objective attitude, or the *will* to do good, as itself the only objective value. The value of the particular ends which the good will sets before itself is relative to human desires. Particular acts are means through which the good will tries to promote the happiness of others. But our knowledge of the means is extremely uncertain, and our ability to effect them very limited. Not the best will in the world can do much to promote human happiness. But not only is there very little happiness; what is still more regrettable is that its distribution is so unfair.

On the other hand, man's sense of justice demands equity. If we could satisfy our sense of justice only by an equitable distribution of the joys and sorrows of life among all, then our craving for justice is in a sorry plight. It seems to be humanly impossible to establish this equity. How then is our sense of justice to be satisfied? We may give up all attempt at a fair distribution of happiness in life and seize upon something we can distribute equally, namely, certain obligations which we can all fulfil. No matter what intrinsic or instrumental value these obligations may have, by requiring the same tasks from all, we can display our impartiality. If anyone refuses to take his fair share, nevertheless the fair share is there for him to take. We cannot in the same way apportion to each man his fair share of happiness and say to him, "if you are miserable and unhappy, it is your own fault; your share was there and you

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can't complain of being unfairly treated." But if all are to fulfil the same obligations, although this fulfilment increases the happiness of some and the miseries of others, the assignment of the same tasks to all would seem to be anything but an equitable distribution. We may solve this difficulty by regarding happiness and unhappiness as of no importance, and forthwith ignoring them. If we make ourselves believe that neither joy nor sorrow matters very much, a law which causes joy to some and sorrow to others will cease to be unfair. If the spirit of impartiality is the only thing which counts, then it does not matter what laws we make nor what effect the laws may have as long as we require all to fulfil the same laws. Laws which require the same tasks of all will give us an opportunity of showing our impartiality by voluntarily accepting these same tasks, and in comparison with this spirit of impartiality, joy ceases to have much value and sorrow loses its sting.

True enough some will make the attainment of joy and the avoidance of suffering their chief aim in life; they will therefore try to exempt themselves or others from the common obligations if thereby they can bring some joy into life or diminish some suffering. These are the great betrayers. They have dared to emphasize the value of happiness, and have thereby reminded us of the good things of life which we have denied in the interests of a fictitious justice. These traitors threaten to take away the peace which we have attained by crying "sour grapes" to happiness, and by consoling ourselves with a sterile equity. But we will console ourselves, nevertheless, and count ourselves better off with our righteousness than they with their joys of life. Besides, we have renounced happiness for awhile only. We shall have our reward hereafter, whereas they have had their reward already without paying for it by doing their joyless duty. But they will have to pay for it yet. Perhaps it is some such compensatory psychological process which has partly vitiated Kant's ethical thinking. It is fairly obvious in most rigoristic moralists, and it also seems to fit in with Kant's rigoristic tendencies. Kant would, of course, never have agreed that we may make any laws we like, provided we all agree to abide by them. Kant does seem to have upheld a particular moral code as the only true one, a moral code which, if taken quite generally, seems to have been widely recognized throughout the history of mankind. But, like most of us, he absorbed this code unreflectingly early in life, and with it the sentiments with which it was regarded by those responsible for his moral upbringing. His ethical theory, or at least a certain phase of it, is an attempt to find "bad reasons for what he already believed on instinct." In trying to justify his feelings of approval for a particular moral code, he found he could not justify them on the

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grounds that this moral code was a means to human happiness. Thus the moral code he approved became for him solely the expression of man's good will or will to be fair and law-abiding, and in this, it seemed to Kant, lay not only the primary, but also the sole value of the moral code.

THE METAPHYSICS OF WONDER AND SURPRISE

By R. V. FELDMAN, M.A.

PHILOSOPHERS, accounted wise in their generation and even beyond their generation, have enthroned the unchanging and sung the praises of fatality and acquiescence. But there is a voice even more authoritative than that of the sages—the voice of the Life-Shaper himself. Perched on the height of the human soul, he has set two watchmen, more sagacious and knowing than the Metaphysicians who weave words “About it and about” in the taverns beneath; their names are Wonder and Surprise. Wonder spies out novelty, and Surprise discerns change. Wonder arises at that which is *beyond* expectation; Surprise at that which is *contrary to* expectation. What could completely surpass expectation save the completely novel? What could so drastically dismantle expectation save the hurricane onset of change?

To attach a revelatory significance to spokesmen of the soul so humble as immediate emotions may seem risky; and risky it possibly is. Yet is Philosophy so well off that she can afford to ignore any by-path to the real? The fatalist who accepts all ought to accept, at least as a venture, the possibility that nature (I had almost said Providence) has endowed Wonder and Surprise with oracles that tell no lies. Are the emotions such faulty spies of the promised land? Just as boredom tells us truly that the organism needs a change, may not Wonder and Surprise tell us truly that the Real is on the move and has fresh miracles up its sleeve?

It may be said that the naïver promptings are not blind; but, even so, they must be superseded by the “larger vision” of Philosophy. Yet it would be strange if those extended poems which we call Philosophy were allowed to gag or stifle the more spontaneous oracles. Philosophy itself (as Plato knew so well) is a child of Wonder. All invention and science are the offspring of the Surprise that prompts curiosity to ask questions and explore. Are we melodramatically to posit a pre-established disharmony in which the children are invited to parenticide? Is Philosophy wantonly to upset the bowl from which she herself drinks the waters of life?

We have been content, so far, simply to suggest that the testimony of “immediate” emotions, such as Wonder and Surprise, should be treated with respect. That this particular track is not without pitfalls is painfully obvious. What these pitfalls are we shall

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indicate further on. But, the reader may enquire, what is our metaphysical interest in such a wild-goose chase? The answer is, that we humans seem rather badly off when we examine our intellectual tentacles into the Real, and that therefore the evidence of any fresh witness should not be overlooked. We have already learnt from Locke that, though we know our station and its duties sufficiently well to live a life pleasing both to God and Man, we run up against obstacles when we meddle beyond. "Critical" Philosophy, in its turn, has confronted Speculation with a "So far and so far only" notice. Nowadays, Biologism rubs in our Metaphysical ignorance. Our senses, our instincts, our intellections are all instruments of adaptation; our vision has been constricted in order that we may survive. Some philosophers, indeed, proudly credit the mind with a long list of indigenous categories. What more can we want? But if identity, difference, causality, etc., are offered us in abstraction from experience, we dangle nought but notional luxuries. Such collocations of adjustable terms are delightful to analyse, but they do not lead us beyond our own thoughts. If, on the other hand, we predicate them of experience, we are never sure if they are rightly applied. Identity is identity, but what we treat as identical may really not be so. Our notions are neat and simple, but we may manipulate them with clumsy fingers. Other philosophers favour Intuition, but their opponents must be allowed the intuition that this Intuition is an honorific name for irresistible beliefs for which we are too lazy or too wise to seek the reasons. The future is unknown, but it is comforting to delude ourselves that we possess a private insight into the "Not-Yet" Others, again, endow "Practical Reason" with wings by which she soars aloft into the Transcendental; but though all agree that "Right is Right," or "one ought to do one's duty," the thing that interests us is the actual situation, and we are never certain that any of our actions was unconditionally right: "With God alone is the truth."

Our range of certitudes is thus very limited, and those that we possess hold good of abstract formulae or significant collocations of words. This poverty of our resources I have stated "maliciously," captiously, and somewhat too much in the manner of an advocate. But I have done so purposely, in order to send up the price of any information given by a fresh source. Let us at this point ascertain the rôle of Wonder and Surprise.

Our lives are governed by expectations and anticipations built into the soul by need, convention, and routine. Expectations are unruffled and faint; anticipations are more eager and vividly coloured. But both alike, be they relaxed or keyed up, presuppose a fixed order of things into which the future will fit. Events which

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are likely to be "Non-Conformist" do not trouble their calculations. Pleasure and pain, success or unsucess, we come to take for granted, and each outflowing, as it springs to the surface, we tend to attribute unconcernedly to the fixed and immutable scheme of things. Yet, against ourselves, against our interest, against the propaganda of fixity, which the mere stress of living drums into our ears, the Disposer of destinies pulls up the blinds and startles us in spite of ourselves. Change, bare, unqualified change, darts suddenly before our gaze and evokes bare unqualified Surprise: "Surprise-in-itself," neither pleasurable nor painful, but simply Surprise. Novelty, also, like a sudden raincloud, bursts upon us unforeseen and unawares, and from novelty, simple and unqualified, arises the Wonder which is momentary, uncomplicated, and unmixed. Both attitudes, in their instantaneous apparition, are unadulterated either by pleasure or pain; and yet, as psychologists have insisted, they are such that, at their very inception, we succumb to an apprehension that shoots through and unsettles. Whence springs that less than painful malaise? The reason is that both alike overtake us "in spite of ourselves," not indeed contrary to what we desire, but contrary to what our mental habits might have led us to desire. "In spite of ourselves" they force us into wonderings externalized in gesture or let loose to ruminate through the mind. So much, indeed, are they "in spite of ourselves," contrary to our accustomed idolatry of the static, that we are surprised at our own surprise and wonder at our own wonder. We had drawn the curtains and retired snugly into our own "Nil admirari," when novelty, like the Cupid described by Anacreon and Herrick, stepped up to our door and "knocking, us molested."

I hinted above that certain pitfalls endangered an enquiry such as the present. The most insidious of these I shall now explain. The "relativity of our emotions"—who is not familiar with this phrase? It will be said that Surprise is simply "baffled curiosity" in the spectator, that wonder is nothing but a mental leak in a mind that yet has much to learn. With knowledge surprise evaporates, with experience wonder is pensioned off. Both are illusions that wisdom must smile away. Each argues an attitude in the subject, but neither discloses a quality in the object. Doubtless such an objection states what seems true of events when the initial upheaping has vanished and we review them again at a distance and in retrospect. Possibly the quality that was adjectival to the happening may itself be neither surprising nor wonderful. The essence that broke through that spurt of becoming may reject or disown our untutored valuations. But the actual moment of occurrence, the vanishing transience through which the essences broke loose as wild horses through some unfastened gate--these in their

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bare suddenness and surface-breaking novelty were, I think, the true causes of the emotions that flashed up, lit their light, and passed away. Again, it should count in favour of Surprise and Wonder that they are what have been termed "Neutral emotions." They do not say "choose this" or "avoid that"; they are not pre-disposed to prefer one quality to the exclusion of another; they do not act as danger signals to the organism; their message is not sweetly tendentious in the interests of some vital well-being; they do not evaluate, they simply accept. May not such a disinterested receptivity have some keener organ of its own to seize the Real before preference has selected and sorted out?

A second objection might be this. The emotions seem too low in rank to possess an eye of their own. Subservient to organic conservation, they are but instrumental to faculties less preoccupied and more highly endowed. They are not feet to climb and peer beyond the wall, but simply ladders by which Reason, Insight, or whatever is first of the speculative aristocracy, may mount upward and look.

Such an *a priori* helotization of our passional attitudes might have seemed conclusive in some more tightly graduated age, when hierarchies were fixed and men believed in Reason and Reason alone. But nowadays the "landmarks are removed," and every faculty is given a chance and given likewise a high-sounding name. Even before Bergson we had heard of a "clarified sentience" for which no antinomies would remain. The phrase clung to our memory, but what precise mental attitude it denoted, what visions it would unfold, was less evident to the uninitiated. That it was more than a roundabout invitation to read writers Ruskinian or Pateresque we suspected, but further than such a suspicion our knowledge did not extend. Have not Wonder and Surprise something at least vaguely reminiscent of that Bradleyan term that comes to stay and remains to perplex? Are they not at least "Sentience" un-mixed and unadulterated by self-feeling and the insignificance of actional valuations? "Clarified" indeed they are not: they are still ruffled and not smoothed out. But if not "clarified," they are at least clarificatory--the initial collision between convention and creativity which both challenges and reveals.

In the *Theaetetus* (155 D), Plato with characteristic grace says Thau-mas (Wonder) was the father of Iris. This genealogy is all the more apt if we remember that Iris is the messenger of Heaven who penetrates into the Stygian realms which for us will symbolize conventional darkness and mental death. Wonder begets tidings that dazzle like the rainbow, uniting heaven and earth; and the divine powers to which it ministers are novelty and change. In another way also Wonder reminds us of the rainbow goddess. For

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as the soul is agreeably stricken by Wonder, so also "our hearts leap up when we behold a rainbow in the sky."

Note.—I have not troubled in this article sharply to distinguish between Wonder and Surprise. Such distinctions are competently stated by Drever and Shand. There is no need to reduplicate what is already achieved. For the views of earlier moralists I would refer the reader to Brown's *Philosophy of the Human Mind*—an old-fashioned work which is meritorious enough to deserve mention but not arresting enough to deserve quotation.

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F. ENRIQUES and G. de Santillana have begun in collaboration the composition of a general history of scientific thought. The first volume of this work, which has been recently published, is concerned with the science of antiquity,¹ and to a large extent covers the same ground as the history of ancient philosophy, as the frontiers of philosophy and natural science, at any rate until the time of Aristotle, were not yet clearly differentiated. But the two historians are interested in bringing into prominence a great many problems and personalities that the history of philosophy generally leaves on one side, although they help to complete and vivify the picture of the mentality of the ancients. Mathematics, medicine, geography, astronomy, applied mechanics, and physics, in short all the particular scientific studies that were just beginning to detach themselves from the parent trunk of general philosophy are studied by the authors in their individual developments and through the personalities of their cultivators. The explanations are clear and simple and can be followed even by readers unversed in science; the information is at first hand and is supplemented by a careful discussion of sources. The scientific questions are not isolated from the historical setting of the civilization of antiquity, but are shown in relation to matters of philosophy, religion, art, and moral and political life. The bibliography, intended for the more purely scientific and technical departments of philosophy, forms a very useful and timely completion of the bibliography of philosophic thought in general.

In the study of historical personalities traditionally numbered among the philosophers the authors follow the method introduced by Gomperz, Tannery, and Burnet, which consists in passing over the more dialectical and metaphysical aspects of their works in order to bring out more clearly their physics, of astronomical, or biological significance. It is a method that has undeniable advantages; by its means the history of the presocratic thinkers, for example, has been thoroughly revised in the last decades. Previously it dabbled too much with the formulas of abstract metaphysics, and by its very abstraction gave rise to fallacies and anachronisms in the transposition of ancient and modern problems. Present-day researches, on the other hand, by showing that those formulas were attached to well-defined physical views, have helped to objectify them in time and space, and have given them a more concrete sense. But these advantages are counterbalanced by corresponding defects, which consist in regarding as adventitious and negligible the dialectical and metaphysical translation of physical problems, although it is essential for fixing the logical structure of the physics of antiquity. The pure science of being and not-being, of the one and the many, of identity and difference, ought to be studied in its vital bearing on the physical problems of the empiric world, in order to gain a true understanding of Greek thought. Otherwise there is a risk of bringing in evidence only the modern anticipations of the science of antiquity, and of considering as an aberration or failure the whole *corpus* of Aristotelian physics and astronomy. The authors of the history

¹ F. Enriques e G. de Santillana, *Storia del pensiero scientifico*, vol. i: Il mondo antico, Milano, Treves, 1932 (8 gr., p. 682).

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under review, like their predecessors, have not escaped this danger, which is inherent in the method. When they have to do with Parmenides, the Pythagoreans, Democritus, the scientists in the modern sense of the word, that is according to the modern ideal of science, they have not asked themselves why this science has waited twenty centuries before seeing the light which it was on the verge of greeting. The truth is that, behind the suggestive analogies with modern science pointed out by the authors, there were logical and metaphysical problems of a different kind, which came to be fixed afterwards in the doctrines of Plato and Aristotle. These doctrines are compared by our authors with excessive haste and a somewhat negative judgment unsatisfactory to our historical sense. They concede to Plato some "formal" anticipation of the physico-mathematical science, but treat Aristotle somewhat cavalierly, and even omit to disclose the principles that informed his physics (for example, the conception of movement in his typical logical structure), confining themselves to retracing the more obvious aspects of his view of the world. They will be obliged to take cognizance of this deficiency when, in the course of their work, they come to study mediæval science, which is based wholly on the Aristotelian models.

A philosophical undertaking on a large scale has been begun in Italy in the translation of Zeller's classic *Philosophie der Griechen*. It is being continued down to our own times with the addition of notes and supplementary chapters. The first volume has already been published, under the editorship of Mondolfo, and comprises the introductory part of the work (relations with the Orient: internal and external sources; religious, moral, and social life; the characteristics of the Greek genius).¹ Mondolfo's additions bulk much larger than the original text and contain a precise and exhaustive critical survey of the whole philological and historical literature from 1891 (the date of Zeller's fifth edition) until the present day. A similar work had been partially effected in Germany by Lortzing and Nestle for the sixth and seventh German editions, but the Italian editor's completion is much fuller and is extremely useful for the student, as it sets before him, together with Zeller's standard text, all the most recent developments of particular philological and historical questions. In this introductory section the survey of studies in Greek religious thought and the Greek genius generally is of special importance. Zeller had denied or minimized the philosophical importance of the mystery religions, in particular the Orphic cult, and had been one of the most authoritative upholders of the "classical" view of the Greek world. Now all the most recent researches from Rohde onwards have successfully endeavoured to bring into prominence those elements of the Greek genius that we might call "romantic," which are most conspicuously in evidence in the mystery religions. The historical picture is thus greatly enriched, and Zeller's "classical" view—as Mondolfo appositely remarks—has been superseded in so far as it is one-sided, but not fundamentally disproved. Rather might it be said that it has acquired greater force by the very fact that "classical" form (the sense of limit, order, harmony, etc.) is not understood as an independent value but as a force that binds to itself a content of realistic and passionall life and succeeds in triumphing over it. Greek idealism in this synthesis with realism acquires much more depth.

An important contribution to the history of political philosophy is made

¹ E. Zeller, *La filosofia dei Greci*; Parte I, I presocratici, vol. I: Origine, caratteri e periodi della filosofia greca, Traduzione e aggiornamento a cura di R. Mondolfo (La nuova Italia Editrice, Firenze, 1932, pp. xv, 425).

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by two small works recently disinterred by Croce and composed in 1791 and 1793 by an Italian of Trieste, Antonio de Giuliani, an Austrian subject who studied with an alert and unprejudiced mind the political and economic vicissitudes of Europe in the period between the enlightened despotism of Joseph II and the outbreak of the French Revolution.¹ From his first writing, "*Saggio politico sopra le vicissitudini inevitabili delle società civili*," Giuliani, who in his youth had shared in the generous illusions of illuministic rationalism, already appears disillusioned, as if he no longer believed in the power of reason to regulate and guide the course of human events. According to him, man believes that everything is guided by reason because he reasons on everything that happens. On the contrary, the forces that govern the interweaving of events are much more elemental and natural, and politicians are rather passive instruments than active artificers of the course of history. There is an elemental principle of life that regulates the life and death of social groups. This principle is as much hidden from politicians as the principle that animates living species is concealed from physicians. Man falls sick and dies despite the efforts of much vaunted science; and societies languish and die in spite of the efforts of politics and legislation. This principle consists in the fact that there exist two classes which ought to balance one another—the class that produces economic goods, and the class of consumers that only exists by virtue of the former, and which corresponds to a certain extent with the "sterile" class of the physiocrats. As long as the two classes balance society has a prosperous and harmonious life, and these conditions are usually found in the less progressive phases of an historical period when the mass of production sufficiently covers consumption. But in the periods that are generally considered most progressive, when population is rapidly increasing and great urban agglomerations begin to appear, Giuliani is on the contrary inclined to note a beginning of decadence and dissolution. "The equilibrium of the two classes begins insensibly to alter; men multiply without any restraining law to regulate the increase of population according to the means of subsistence. Instead the politicians hail with satisfaction the increase of population and do not perceive that in nature the various living species are balanced by mutual destruction, while man, with whom no other animal can enter into competition, is condemned to regulate his species himself, and to be the author of his own destruction." Hence revolutions, wars, commercial rivalries, and all those vicissitudes of human history that are usually named from their apparent causes, though they have at the same time a hidden reason disguised in the undeviating order of nature.

The English reader will easily recognize here the characteristic traits of the doctrine of Malthus, but it is Malthusian doctrine *avant la lettre*, as it antedates by seven years the famous *Essay on Population*. There are wanting in Giuliani the mathematical determination of the two series, arithmetical and geometrical (which is anyway the most arbitrary part of the *Essay* of Malthus), and the counsel of moral restraint. Nevertheless both authors are equally alive to the complex consequences resulting from the disproportion between population and the means of subsistence, and both have, as Croce says, "the merit of having considered not only the paradisiacal aspect of *crescite et multiplicamini*, that of placid, increasing, and idyllic prosperity, but the demonic and revolutionary aspect as well." Croce also asks whether Malthus might have come across Giuliani's essay, which was published in French and German as well, but even if a direct relationship is excluded it

¹ A. de Giuliani, *La cagione riposta delle decadenze e delle rivoluzioni* a cura e con introduzione di B. Croce, Bari, Laterza, 1934 (pp. xxviii, 108).

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is still certain that the ideas of the *Essay on Population* were in the air towards the close of the eighteenth century. In any case this would not diminish the originality of Malthus, because the merit of a thinker does not consist in the arbitrary invention of problems, but in the interpretation of the exigencies of his own time and in the focusing of ideas that are circulating widely in a vague and indeterminate form. Finally, we may note the characteristic that Giuliani, like Malthus, deduces from his economic principle a political attitude that is not only conservative but to some degree reactionary. Giuliani's second essay, written in 1793 and addressed to the National Convention of Paris, is an indictment of the French Revolution. It is, however, clearly differentiated from the arraignments of a Burke or a de Maistre because it is not a *laudatio temporis acti*, but a judgment on the vanity of abstract proposals for the reformation of humanity, and on the injustice of the ferocious revolutionary condemnations of men and systems that, far from being the artificers of social evils, are themselves the unconscious instruments and victims of greater forces.

GUIDO DE RUGGIERO.

(Translated from the Italian by CONSTANCE M. ALLEN.)

PHILOSOPHY IN RUSSIA

PHILOSOPHICAL literature in Soviet Russia displays the same arid uniformity as before and is almost entirely confined to the exposition of dialectical materialism. That can be seen from the very titles of the books published within the last year: *Dialectical Materialism—the Philosophy of the Proletariat*, by V. Pozner; *Dialectical Materialism*, extracts from Marxist classics, selected by the students of the Institute of Red Professorship; *Marxism and Natural Science*, a collection of articles; *The Problem of Causality in the History of New Philosophy and in Dialectical Materialism*, by B. Bogdanov and Mihailov. The latter is a digest of papers read at the seminars on the history of philosophy at the Institute of Red Professorship and does not contain a single original idea or throw any fresh light on what has already been said on the subject by Engels, Lenin, Bykhovsky, and others. The very quotations from Engels and Lenin are the same as are generally made in Soviet works on dialectical materialism. Arzhanov's *Hegelianism in the Service of German Fascism* is a critique of neo-Hegelian theories from the orthodox Marxist point of view. But although Hegel's name is often used merely as a bludgeon against the infidels, the non-Marxists, there is a genuine interest in Hegel's work in U.S.S.R., and a desire to introduce it to the general public. In 1929 the Marx and Engel Institute undertook the publication of a Russian edition of Hegel's works, except his lectures on the "Philosophy of Religion"; this year two volumes of Kuno Fisher's *History of Modern Philosophy*, dealing with Hegel (first translated into Russian by Lossky thirty years ago), have been republished.

As before, dialectical materialism is contrasted with idealism on the one hand and mechanistic materialism on the other, and just now it is perhaps the latter that is attacked more bitterly. The latest formulation of the official Soviet philosophy is to be found in Pozner's book, *Dialectical Materialism—the Philosophy of the Proletariat*. Like other U.S.S.R. writers on the subject during the last five years, Pozner argues that the world-process is a creative evolution, leading from the lower stages of being to the higher—from the

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inorganic matter to the organic, and then, further, to social life. The content of the cosmic process and the laws that govern it cannot be reduced to a mere summing up of elementary mechanical processes, as the materialists of the old school imagine. The chief condition of evolution is the struggle of the opposites, the presence of inner contradictions inherent in every event. This inner struggle is to be found even in inorganic matter which contains a faculty akin to sensation. The human mind can and does influence material processes; man's spiritual achievements, though they have their roots in economic relations, can in their turn affect and modify the economic basis. The stress laid in dialectical materialism upon the supremacy of the human factor over material environment has a practical bearing: it justifies the Soviets' belief in their power to reconstruct Russia according to plan, and is therefore in keeping with the Communist creed. Pozner makes continual excursions into politics in order to show how well his philosophy fits in with "the general line" of the party. He is so anxious to emphasize the importance of collective units as against individuals that he introduces it even into his account of sensation. Lenin taught, says Pozner, that sensation was an image produced in the mind owing to the affections of the sense-organs by an external object, but "dialectical materialism goes further: according to it sensation results from the interaction between the *social* man and his material surroundings"—whatever this may mean!

The most remarkable book that has appeared in the *émigré* literature during the last year is unquestionably Father Sergey Bulgakov's *Agnus Bozhi* (*The Lamb of God*), published by the Y.M.C.A. Press in Paris (460 pp.). It is one of the best things Father Sergey has written. The style is clear and straightforward—which is not always the case with his earlier books—and he faces the problems at issue with the intellectual fearlessness characteristic of the Russian mind at its best. Many of his contentions are highly debatable; some of his fundamental ideas—of matter, of time and eternity—are not sufficiently thought out; now and again there are curious lapses into a sort of Sunday-school theology, as, e.g., in the argument about free will on page 169; but in spite of all this, *Agnus Dei* is a great book. It is professedly theological, but there is a freshness and originality about it which one does not as a rule associate with books on theology. Much of what the author says is of purely philosophical interest and must be tested by the ordinary canons of logic and reason, and not by an appeal to the authority of the Scriptures. Bulgakov sets out to show the metaphysical implications of the central fact upon which the Christian religion is based—the Incarnation of the Logos. He does not question the fact itself, for his initial standpoint is that of an Orthodox Christian, but he goes on to ask what it means and how it is possible. In trying to answer this, Bulgakov works out a system of philosophy that is reminiscent of neo-Platonism and Vladimir Solovyov, but carefully avoids any approach to pantheism. He argues that we must distinguish in God His self, which is Tri-Personal, and His nature or *ousia*, which is the all-embracing and inexhaustible fullness of being. God creates the world which is co-eternal with Him because He needs it as the object of His love. The positive content of the world is the Divine nature itself. Sophia, the all-in-unity or the perfect organism of Ideas. Creation "out of nothing" means that God posits this divine world as a *becoming*, plunging it into the stream of time and thus introducing into it an element of relativity, of non-being. The "nothing" is a *state* of being, the "not-yet" aspect of it, the potentiality of becoming. The act of creation is thus an act of voluntary self-limitation or *kenosis* on the part of God. Beside His own absolute existence He posits an existence that is relative, but is called to share in

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the fullness of the divine life. This requires a long and laborious process of development in the course of which every created entity becomes in and for itself that which it was for God from all eternity. The purpose of the cosmic evolution is that the created world should become one with its heavenly prototype. The possibility of this final union with God rests upon the fact that in its essential nature the world is divine. Man is made in the image of God, and his final end is *theosis*, deification. Human nature is "conformable" to the divine, and, in becoming man, the Logos sanctifies it from within, not only individually in the person of Jesus Christ, but for all men, since Christ is the living centre of mankind.

The chapters dealing with the divine *kenosis* and with the union of the two natures in Christ are the best in the book, and will be read with absorbing interest by all who want to understand the meaning of the Christian dogma. And if those who regard it as mere moonshine could be induced to read the book, they would at any rate see that at the bottom of the dogmatic definitions of the Church lies not an unreasoning faith but deep and subtle thought.

Most of the articles in the recent numbers of *Put* are concerned with religious questions, and a good many are devoted to the consideration of social and political problems from a Christian standpoint. There are, as usual, excellent reviews of current philosophical literature, both Russian and foreign.

NATALIE DUDDINGTON.

NEW BOOKS

Beauty and Other Forms of Value. By S. ALEXANDER, O.M., Litt.D., F.B.A., Hon. LL.D., D.Litt., Litt.D. (London: Macmillan & Co., Ltd. 1933. Pp. x + 305. Price 10s. 6d. net.)

Professor Alexander's new book is based upon numerous papers published by him since *Space, Time and Deity*. It is not a set of independent essays, however, but a continuous work containing additional subject-matter, and the wider public which awaits eagerly the words of his voice and his pen—equally distinguished and equally unabated in beauty and vigour—will be grateful for this new systematization and consolidation of his thought. The more so because though this new work is mainly on aesthetics it is by no means exclusively so; we are given Professor Alexander's synoptic view of the values and their place in reality.

The book is divided into three parts: I. Beauty; II. Truth and Goodness; III. Comparative Value in General. The order, as can be seen, is from "higher to lower" values. This is convenient for some purposes, but Professor Alexander insists that it is not to be taken as implying that the lower can only be understood in terms of the higher.

Value (or "higher" value in general) is described sometimes as arising out of the satisfaction of some impulse or other, sometimes as being that satisfaction itself. The value of beauty—or of the beauty of fine art which is chiefly considered—arises from (or is) the satisfaction of the impulse of construction diverted from practice and become contemplative. Being contemplative it is "disinterested." The beautiful object also gives rise to illusion (admittedly an unhappy epithet), it has "significant form," unity in variety, and it is individual. But the full significance of such terminology can only be understood if we remember always the importance of the *material*. Fine Art, Professor Alexander rightly urges, is not mere translation for purposes of communication of ideas or images in the mind; fine art has no existence prior to material embodiment—though, of course, more or less perfect or imperfect images of this embodiment may occur and may facilitate construction. "What does exist is the subject which detains the artist, and fixes his thoughts and images and passions and gives his excitement a colour and direction which would be different with a different subject-matter. Excitement caused and detained by this subject, and at once enlarged, enlightened and inflamed by insight into it, bubbles over into words or the movements of the brush or chisel" (p. 59).

The most original part of the section on Beauty is, I think, the application of the ideas of "prose" and "poetry" to the arts other than literature. Here is no mere analogy. Painting, sculpture, architecture, music, have their real poetry and their real prose, the difference depending upon the proportion between the formal and the representative elements. Poetic art is primarily lyrical, dramatic; springing up spontaneously in a self-contained, autonomous life. Prose art is analytic, purposeful, instrumental to an end outside itself. Salisbury Cathedral or St. Mary Redcliffe at Bristol, to take architecture only, are like plants or trees growing out of the ground, culminating in their spires. Somerset House, on the other hand, is prose—though good prose in

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its unity and organic character. Its rows of windows reveal its function as an office. All architecture, it is true, has uses; but poetic architecture "lives out" its uses, prosaic architecture "displays" them. This all seems to me interesting, important, and, I think, sound. (I agree, however, that the pretty suggestion of a prose and poetry in *biscuits* (digestives and Bath Olivers) is "merely an analogy"!)

I have no space even to enumerate the topics of the greater part of the rest of the book. I may simply mention the discussions of beauty and greatness (depending on form and subject), the objectivity of beauty, and some topics of the last two shorter sections—on science and history, on the nature and value of truth, on morality (after Adam Smith), on psychological and on sub-human values. Indeed, I find it difficult to criticize Professor Alexander without many reservations and qualifications, not because I do not often believe him to be profoundly wrong, mainly in matters I have not mentioned, but because his language is elusive, and he seems to unsay here what he says there. It may be the very felicity, even the occasional poetry, of his words, "living their own autonomous life," which dumbfounds me. Whatever the reason, I know that I do not know him as I could wish, and I expect he could refute my criticisms by quoting antitheses to my theses.

I find Professor Alexander's now familiar metaphor (is it more?) of the mixing of mind and matter interesting, particularly where he shows how in fine art the two factors are fairly evenly balanced, whilst in science reality rather than mind, and in morals mind rather than material, is in control. But I doubt if it helps to call science or morality "an art, though not a fine art," and I think the importance of the instincts of construction, curiosity, and so on, is exaggerated.

Again, satisfaction may possess value; value may arise out of satisfaction. But is value satisfaction, and can we say that satisfaction is the only thing (in the realm of "higher values") which possesses (not to say is identical with) value? There is valuable satisfaction in finding truth, but surely truth, if it is a "value" at all, is not the "objective satisfaction of the impulse of curiosity . . . become contemplative" (p. 194). Truth is, in the words of a phrase previous to this, "true knowledge," and true knowledge or science is (or is something like) "a faithful representation of reality. . . ." But I am still, after careful study of conflicting accounts, in the dark as to what Professor Alexander means by truth, and by the value of truth. His view of goodness, "Goodness is the character which good conduct possesses of satisfying the social impulse, and of being approved" (p. 265). I think I do understand better. I can only reply to it (for it involves a whole philosophy) in the words of the second remark of the caterpillar to Alice after her repetition of, "You are old, Father William." The problem of beauty is much more complex. I agree in the main with Professor Alexander's analysis, but it seems to me not to go far enough. He rightly rejects the view that beauty is the expression of "emotion." And he makes much of "subject-matter." But I wish he had gone further and had analysed the grounds of the artist's excitement and emotion about his subject-matter. I suspect he might have found beauty to be an embodiment of many grades of values, some of them objective and not subjective—which would have led to a very different theory. On the other hand, if Professor Alexander could see Spinoza's view of good (p. 10) reversed, he would not be himself, and we should not have had this book, with its provoking charm, nor Professor Alexander's general philosophy, which is an art, and sometimes a fine one.

LOUIS ARNAUD REID.

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The Balfour Lectures on Realism. By A. SETH PRINGLE-PATTISON, LL.D., D.C.L., F.B.A. (Edited, with a Memoir of the Author, by G. F. BARBOUR, D.Phil.) (Edinburgh and London: William Blackwood & Sons, Ltd., 1933. Pp. x + 258. Price 7s. 6d.)

All who knew Professor Pringle-Pattison, and many glad now to know something of this most distinguished Scottish philosopher, will be grateful to Dr. Barbour for the painstaking and restrained Memoir which occupies nearly two-thirds of the present volume. The rapid rise of Andrew Seth to the premier chair of Logic and Metaphysics in Scotland is seen by the reader to have been predestined: no other fate could have befallen this pre-eminent student of Campbell Fraser. But it was a strange turn of destiny which—in middle life—made the grave scholar Laird of a broad and beautiful domain in the Borders, and gave him the name by which he is known to our generation, but which baffled a public already familiar with several volumes written by Seth. The Memoir, it is sufficient to say, adequately reflects the dignity, generosity, and quiet good humour with which Pringle-Pattison lived and worked in his dual station. Concerning his development as philosopher a paragraph may be permitted here.

His early studies allied him with the then gathering school of Anglo-Hegelians. A reaction from the narrow associationist orthodoxy of the time was inevitable; but from the first he adhered to the extreme right-wing of the new party, criticizing alike the pseudo-philosophy of Bain, the subjectivism of the German neo-Kantians, and the materialism of the Hegelian left. His own deep-grained realism, inherited from generations of Scottish philosophy, moved him to welcome Hegel's repudiation of the *noumenon* on behalf of the intrinsic validity of knowledge. But he soon rejected—if he ever consciously adopted—Hegel's mode of assuring this validity by identifying knowing and being. Thus in the first series of Balfour Lectures (*Scottish Philosophy*, 1885), and steadily thereafter, he insisted upon the necessity of a realist epistemology to the exposition of which this third series (now published for the first time in book form) is devoted. In the intermediate course (*Hegelianism and Personality*, 1887) he so sharply attacked the "Master" and brought into such high relief positions antithetic to Hegelianism—notably his emphasis upon the integrity of persons in respect of one another and the all-enveloping Absolute—that, in my belief, he could never thereafter be deemed an Hegelian. Dr. Barbour appears to suggest a considerable subsequent return upon earlier positions, and a larger measure of substantial agreement with the school, but—if I am not mistaken—he under-estimates the cleavage between the two doctrines; and it is certain that Pringle-Pattison never abated his main differences with Hegel. The "qualification" he offers in *The Idea of God* (1917) of the notorious phrase, "impervious in a fashion of which the impenetrability of matter is a faint analogue," is rather a concession to further knowledge of the nature of matter than a diminution of his position with respect to finite persons. To this the well-known controversy with Dr. Bosanquet (who represents, I suggest, the most moderate Hegelian position) bears witness. To the end he insisted that, while personality is measurable by the kind and degree of its interconnections with other persons, these interconnections constitute the conditions of a personal entity and not its cancellation.

He did, however, withdraw his semi-deist view of the relation of these persons and their Maker; and from this extreme he tended farther toward a pure immanentism than would appear fully compatible with his own ethically formed philosophy. He therefore expressed himself strongly against all notions of the transcendence and creativity of God. These lectures, *e.g.*, close with the characteristic phrase, "There is no region outside of God into which he could

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extrude his creatures, and cut it adrift from himself." But (it may be asked) does not this type of denial follow a lapse in Pringle-Pattison's ideal anthropomorphism toward conceptions more appropriate of spatio-material than of the personal entities by which he purports to account for the world? This feature is, perhaps, an idiosyncrasy rather than an integral element of his position. And—on the other side—those who hold that immanentism is inadequate, and that creaturely *dependence* is something real, must do so with full awareness of the abysmally mysterious character of the relation between the Creator and the creature, which, nevertheless, they feel compelled to postulate.

In the four *Lectures on Realism* Pringle-Pattison justifies the prepossession of contemporary philosophers with epistemology, expressing the conviction that without clearness in this field "we can hardly expect to make satisfactory progress in philosophy" (p. 182). His chief contention is that once epistemology and metaphysics are clearly distinguished it is manifest that in the former realism is alone tenable (or even statable). "Idealism," he observes, "exists only as a criticism of Realism. When developed itself as a substantive theory, it leads to a view of existence which is a *reductio ad absurdum* of the doctrine in question. . . . Realism is left in possession of the field, and a critical or carefully guarded Realism is established as the only satisfactory, indeed the only sane, theory of knowledge" (p. 192). Hegelianism he describes as an "hypothetical divine epistemology" masquerading as a "metaphysics of existence." "But," he adds, "if Hegel swamps Epistemology in Metaphysics, the Realism of Scottish philosophy often errs in an opposite direction" (p. 181). The defect of the school of Reid is that it takes the duality of knower and known for the basis of an irreconcilable metaphysical dualism. Such a "metaphysical dualism would cleave the universe in two, leaving two absolutely non-communicating worlds. But the possibility of knowledge 'becomes, on the other hand, the surest guarantee of metaphysical monism—of a unity which underlies all differences'" (p. 250). And further, "Epistemological investigation . . . must tacitly presuppose this metaphysical unity of the subjective and the objective, or, to put it more strictly, the harmony of the subjective function with the universe from which it springs" (p. 258). On this view, then, knowledge is seen to presuppose a transsubjectivity which is the basis of an epistemological dualism, but which points also (unless we are content with a total scepticism) to a metaphysical monism.

Professor Pringle-Pattison, however, derives his metaphysical idealism not from this indeterminate harmony between the knower and the known, but from a wider "ideal anthropomorphism" which lies at the root of all—in the widest sense—idealist theories. His metaphysic is not developed in these lectures which conclude with the opinion quoted above; but it is present in outline in the preceding series, and its general tone may be gathered from the observation (p. 193), "If we take away from Idealism personality, and the ideals that belong to personality, it ceases to be Idealism. . . ." This observation may throw a little light upon the somewhat obscure controversy now conducted in an American contemporary as to the nature of idealism. In view of the confusion raised about this term it may well be time it was dropped, but that the type of philosophy it imperfectly designates is perennial cannot for one moment be doubted. Professor Pringle-Pattison would be the last to suggest that theories of universal nature so founded afford certainty (for he enjoyed a full measure of Scottish caution), but he could point out that in this they are at one with every alternative, and that on this level the decision can only go with what proves most congenial in the long run to the generality of cultivated and critical minds.

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In the closing pages of the Memoir Dr. Barbour prints a letter to Pringle-Pattison from F. H. Bradley. It records a surprising agreement with the essentials of *The Idea of Immortality* (the Edinburgh Gifford Lectures, 1922), and contains the remark that, "The mood in which my book" (*Appearance and Reality*) "was conceived and executed was, in fact, to some extent a passing one. . . . I cannot alter the book now, though I would not repeat all of it. And in particular I certainly would *not* say now that 'a future life must be taken as decidedly improbable.'"

We are deeply indebted to Dr. Barbour for what has evidently been a labour of love.

RALPH E. STEDMAN.

The Emergence of Novelty. By LLOYD MORGAN, D.Sc., LL.D., F.R.S. (London: Williams and Norgate. 1933. Pp. 207. Price 7s. 6d. net.)

Professor Lloyd Morgan has written this volume in response to requests from those who have found difficulties in his already published views. He attempts by his ABC method to show that what is required of him and that what he seeks to do is to give an exact but purely interpretative and in no way metaphysically explanatory account of what happens in terms of the notion of emergence. It is interesting to note the frank recognition of the need of the Aristotelian conception of potentiality and the attempt to define it in accordance with the requirements of modern empirical science.

The main subject of discussion, however, is the idea of *emergence in mind*. Professor Lloyd Morgan is anxious to maintain that there is such a thing as emergence in mind. He speaks, of course, on the basis of a wide experience as a psychologist; and yet it is here where it is most difficult to follow him. For instance, following James Mill, he argues that "mental space" is emergent in mind. Value is an emergent in a relational field of which mind is a constituent, and thus would seem to be supra-mental; yet it is "possessed by mind" and also characterizes the object or objects which are the other constituents of the relational field.

There are several reasons why one feels difficulty with this view. There is an obscurity in the term *mind*; the difference between Professor Lloyd Morgan and Professor Alexander is largely due to a disagreement as to what is mental and what is non-mental. There is an obscurity in the phrase *emergence of mind*; it seems at times to come perilously near signifying *what mind apprehends* or what is meant by the word emergence in the phrase *the emergence of an idea in the mind*. There is a further difficulty, to which these two obscurities no doubt conduce, expressed in the question whether emergence in mind is in any way analogous to emergence in the non-mental, and whether therefore the term emergence is ambiguous. Molecules are supra-atomic; crystals are supra-molecular; but would Professor Lloyd Morgan speak of emergence in atoms? On analogy, value would have to be spoken of as *possessing mind*. The difficulty arises from the possibility that mind, because of its nature, plays a rôle which makes it impossible to consider emergence in mind and emergence in the non-mental as being in any way analogous.

These difficulties are ultimately of a philosophical nature, and therefore attention must be re-directed to the ABC method. The method may serve to mark the difference between philosophy and science; but Professor Lloyd Morgan intends it to elucidate what he is going to do. He claims to follow a scientific method. The particular points to which he refers, namely Activity, Directive Causality, etc., may give support to his method, even though his

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theory does thereby become complicated through duplicate meanings of these terms; but these philosophical concepts do not exhaust all the philosophical issues that arise. Because of the philosophical assumptions involved, which a scientist need not make, Professor Lloyd Morgan's theory cannot be admitted to be purely interpretative. It comes under the A category, and not merely under the B and C categories.

B. M. LAING.

The Challenge of Humanism. By LOUIS J. A. MERCIER. (New York and London: Oxford University Press; Humphrey Milford. 1933. Pp. vi + 288. Price 10s. 6d. net.)

Those who are not directly acquainted with the philosophical work of Professor Irving Babbitt and Professor Paul Elmer More in America and of Baron Seillière in France will find in this volume a very interesting exposition of their views and of their affiliations with Plato, Aristotle, and the Scholastics, and with Christianity and the Neo-Scholastic revival. But there is another purpose behind this exposition. As expressed in the title, the book is intended to be a challenge of this type of philosophy, called by the author *Humanism*, to every other kind of philosophy, all these being labelled together as *Naturalism*. This sharp distinction of all philosophical thought into humanism and naturalism, if admitted, certainly presents a challenge; but it will seem to many to be an over-simplification that is harsh, arbitrary, unsympathetic, and provocative. Certain idealists may be left to speak for themselves.

Humanism is a term that is coming to have various meanings. Students of literature have their "humanism," which is to be understood in reference to the Renaissance and to which most who argue for humanism philosophically claim to turn for their fundamental meaning. There is a "new humanism" in America which the present author opposes and criticizes. Professor J. S. Mackenzie, in his *Lectures on Humanism* (1907), regards pragmatism as one of the special forms of humanism. F. C. S. Schiller, in his writings, regards pragmatism and humanism as identical. Mr. Mercier opposes humanism in his sense to pragmatism; but that the issue is not so clear-cut as this opposition might suggest appears from the author's remark that all those who are not nominalists might be included under humanism (p. 273). Yet the author makes it quite clear what humanism in his sense stands for. It refuses to merge God, man, and nature, and hence is opposed to monism. It insists upon the possibility of discovering standards raised above the realm of change, being thus opposed to naturalistic relativity, though it recognizes that, since man lives in a changing world and is part of the process, these standards are flexible. It stresses the need of a principle of restraint in human nature, for, contrary to what naturalistic theories maintain, man's impulses are disordered, prone to excess, and incapable of attaining balance and righteousness instinctively, and he is therefore not naturally good. Naturalistic theories, by abandoning these principles, have been disastrous; they have led to a disintegration of individual character, have dechristianized Europe, are dechristianizing America, and are making any religion whatever impossible. They are accused of leading to the World War of 1914; though to the reader this causal rôle is not obvious, and the case of naturalism ought not to be prejudiced by assigning to it without careful analysis any such causation.

It may be admitted that one of the most pressing problems of the day is that of standards. It may be admitted that there is much in humanism, as expressed by the author, which is valuable. Whether, however, man is or is not naturally good is a proposition difficult to decide, partly because of the

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obscurity of the term natural and partly because it is not clear whether a *de facto* disorder in human nature must be accepted as ultimate or has causes of a natural kind. Where questions relevant to human life and conduct are being discussed, two vices of philosophical discussion require to be avoided—the barren method of assertion and counter-assertion and the device of having recourse to powers or faculties of a pretended higher kind. The really vital thing is not whether such powers or faculties do or do not exist, but what propositions or principles are to be formulated as true or sound for human guidance. It is necessary to put the test question, what specific difference does it make for the individual in his life and conduct whether he accepts humanism or naturalism. How does the choice affect his activities, the functions he is to perform, and the performance of them?

B. M. LAING.

East and West in Religion. By S. RADHAKRISHNAN. (London: George Allen & Unwin Ltd. 1933. Pp. 146. Price 4s. 6d.).

Sir S. Radhakrishnan has become a recognized and authoritative exponent of Indian philosophy, and is often quoted as an example of the quality of Eastern thought. It would be more correct, however, to regard him as the example of the blending of Eastern and Western thought. In these essays, the New Testament, both actually and by implication, is more in evidence than the Veda. Radhakrishnan is a Hindu, but no Hindu who had not been deeply influenced by Christianity could have written such a book as this. It consists of a couple of lectures, delivered when on a visit to England, a couple of sermons, both incidentally from Old Testament texts, also given in this country, and an address on Rabindranath Tagore, delivered in Calcutta. Despite the varied character of the contents, there is a unity throughout, created by the spiritual, mystical, kindly, and tolerant outlook on life adopted by the author. Of controversy and argument, as we Westerners understand it, there is not a single trace, and yet in the subtlest way the essays are controversial. There is no denunciation, no challenge, not even irony, and yet as certainly as if he had employed all these methods, and one suspects more effectively, Radhakrishnan gets his points home. For example, the controversial European might desire to remind the East of some of its crimes. He need not. Radhakrishnan anticipates him. "We burnt widows, indulged in human sacrifices, enjoyed execution and torture, demanded hara-kiri; and we accepted them all as part of the recognized scheme of things. When any line of conduct is in conformity with social opinion, we feel we are exempt from personal responsibility." That is an acknowledgment and a confession, but the next sentence simply adds: "To-day a State sacrifices millions of its citizens with a clean conscience in the name of war." There is not the slightest attempt to point the moral, but it points itself. The controversialist would rejoin to the West that if the East burnt widows by the thousand, the West makes them by the million. That is not Radhakrishnan's way. He quietly and objectively sets out widow-burning and widow-making, without saying who did either, as examples of the law that the social conscience abrogates the individual conscience. Similarly he quotes St. Paul's saying that if meat makes a brother to offend, he will eat no meat, and without saying so manages to bring to the reader's mind a remembrance of the offence we give to the Hindu by our lusty beef-eating. He tells us that it is the duty of the strong to help the weak, and adds, without a single word to emphasize the contradiction, that it is understood that backward nations should serve the stronger

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Powers. It is a very subtle and effective method of passive resistance to Western superiority. Tough indeed must be the skin into which these unbarbed shafts do not penetrate. Out of our own mouths we are judged, without a word of judgment being passed on us. Let us at least acknowledge the justice of the proceeding.

E. S. WATERHOUSE.

Christianity and Economics. By A. D. LINDSAY, Master of Balliol. (London: Macmillan & Co. 1933. Pp. vii + 177. Price 5s.)

This little book is big with ideas, developed in five lectures, which were first delivered in 1930, and again in the U.S.A. in 1932. Dr. Lindsay's philosophy is based upon the distinctively Christian principle that our belief in the Fatherhood of God carries with it the implication that we are all children of one father, that economics is a branch of ethics, and our theology should be the best expression of ethics. The business of the State is to provide a framework within which men shall have room themselves to lead the good life. Whether they do so or not depends upon the extent to which they are influenced by ethical considerations, which, for most of us, must have a religious basis, and involve active membership of a religious body, with all the obligations which that implies.

Religion and politics have separate aims, but neither can operate effectively without the active co-operation of individuals, drawing inspiration from either side, moral obligations being inculcated by the one, "rights" and, to a less extent, duties being proclaimed by the other, though it is clear that every "right" enjoyed by one man entails the discharge of duties by others if it is to be enjoyed.

There is no situation in life which has no moral bearing, but it does not follow that economic relations should be transformed into ethical relations, but rather that they should be informed by ethical principles operated by men of their own free will in true freedom and not under compulsive laws. The failure of the present economic system under which we live is a moral failure. Economic relations are impersonal, but if they are to endure, the men and women who have entered on them must be in a moral relationship to each other. That is too seldom the case at present, and when the economic supersedes the moral aspect there is danger. Exchange rather than the simple processes of production dominates our civilization, which is so complicated that it eludes our grasp and drives men either to accept it complacently or to desire its destruction without, in either case, full understanding of the system or its implications.

"Where your treasure is," said our Lord, "there will your heart be also." A scale of values based on the standard of others, on the ground that "a thing is worth what it will fetch," is not a true scale; it has no greater validity than the assumption that the decision of the Permanent Court of International Justice—by eight votes to seven—has any greater claim to acceptance than temporary expediency.

Dr. Lindsay sets forth (p. 83), in language which I personally accept as true and adequate, the distaste and antagonism felt by many to a system which makes great numbers of men in large-scale industry feel that they have lost status or personal dignity because they have no share in responsibility, and are, whether employed or unemployed, mere automata whose bodies "the State" has undertaken to keep alive, but whose personalities are no one's concern.

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No Government, he says, has ever been successful which did not involve loyalty and personal respect, real mutual relations between men. Economic relations are not enough. So far as Communism, Capitalism, and State Socialism depend upon the intensification of economic relations they will fail. So far as politics and religion appeal to the loyalty of men to leaders who expound ideas which are worthy, in their eyes, of loyalty, they will continue to appeal, and rightly so, to active minds. Our sentiments are as real as any facts set forth in a Blue Book or a Balance Sheet.

Dr. Lindsay describes "wage-slavery" as a cant term, but emphasizes the underlying truth that so far as men are treated as instruments, and their personality disregarded, they are slaves, and so far as they lack security of employment, and therefore of a full life, they are worse than slaves. He refuses to condemn competition; it is not inconsistent with co-operation, and he holds that to eliminate competition would entail other evils. He deals firmly with those who object to profit. "The distinction between production for use and production for profit is only between production for a known and an anticipated demand"—the latter a genuine and essential social service (p. 93). Inequality in function and of fortune is inevitable, but produced in excess it causes divisions and misunderstanding which are certainly evil if only because they divide us who are of one family into two nations, as Disraeli noted eighty-eight years ago in *Sybil*. "To be friends with people," says Aristotle, "you have to live with them." Almost every town-planning scheme is devoted to making it impossible for employer and employed to do so.

The author combats the deterministic view of economics, as an admission of human failure and a denial of our Christianity, which cannot acquiesce in the view that man is irredeemable any more than that road accidents are inevitable, that the birth of children is independent of human volition, and that the doctrine of evolution knows nothing of symbiosis and commensalism.

A democratic society is one in which each cares for all. The measure of the success of the religious bodies in England is the degree of brotherliness and lively care for the common good which informs our lives. The measure of Bolshevik ruthlessness is the measure of the failure of the Christian Church in Russia. Mechanization, technical skill, and administration can never make life, they can only magnify and sustain it, whether they are managed by the State or as a public utility or for profit. Inspiration must come from above—from the urge which can inspire men to give to others willingly of their best.

Upon one point only would the present reviewer be disposed to differ from Dr. Lindsay, viz. his estimate of the Co-operative Movement (p. 123). So far as it is locally managed it is, or may be, all he says. So far as it is centralized, and managed by men at a distance and out of touch with the shareholders, it is neither better nor worse than other chain stores, whilst the emphasis on profits rather than on quality and the widespread avoidance of some lines (e.g. retail coal supplies) has weakened the moral prestige that the movement once enjoyed. But this is a small point in a great book.

"The English Nation sit enchanted," wrote Carlyle a hundred years ago, "the poor enchanted so that they cannot work, the rich enchanted so that they cannot enjoy." Dr. Lindsay comes near to Carlyle's view in his application of ethics to politics and in his general analysis of the position to-day. "Leave the high pulpit and the safe cloister," wrote Carlyle, "Down into the market place and see what is to be done." Politics would be enriched by Dr. Lindsay's presence in Parliament; he has done the next best thing and sent his son there.

A. T. WILSON.

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The Will to Fuller Life. By J. H. BADLEY, Headmaster of Bedales School.
(London: George Allen & Unwin Ltd. 1933. Pp. 282. Price 10s. 6d.)

Plato held that there could be no health in States till rulers were philosophers. But before there can be philosopher rulers there must be a body of citizens out of which they can come and by which, when they have come, their mandates can be recognized as the demands of what is best in itself. Before that, again, we must have a race of teachers who are also philosophers. This book, coming from one of our most distinguished schoolmasters, lends substance to the hope that this dream is already beginning to be realized. It is a study of man's life as in its essence a striving towards the values which in the depths of his being he knows to be the highest, and of the conditions that are necessary to secure the success of such a striving. What gives it especial value is that, as the author tells us, it is based on his own experience as a teacher, and is the direct outcome of discussions which he has conducted with his higher classes. It falls into three parts. The first is occupied with a general statement of the nature of values as such, and of those which are called spiritual in the sense of being apprehensible only by a being who can raise himself above himself to the vision of forms of good which transcend the needs of mere existence or are merely instrumental to some further good. The second is occupied with a detailed treatment of the three main forms of spiritual good, the familiar trinity of truth, beauty, and goodness. The third part consists of a short section on "Looking Forward," in which the present state of civilization and the dangers which threaten it are submitted to analysis, and the way to something better shown to depend on the union of a faith (in its essence religious), that these values are not merely relative to human needs but have objective reality, inasmuch as they are that which gives the universe its meaning, with the knowledge of the conditions under which we can best contribute to actualizing them in the life about us. The treatment, however, is subject to two admitted limitations. Though dealing with philosophic subjects, the author disowns any attempt to put forward philosophic solutions of the deeper questions raised by them; and with regard to the most important of them, the nature and place of religious experience, this is "left for separate treatment" (p. 9 n.)—as we hope in a future volume. Readers of *Philosophy* may think that these are serious limitations in a book of this kind (and I cannot help thinking that they are right), and that they leave one with a certain sense of not getting to the root of the matter, e.g. when in the treatment of pleasure this is described as "the fundamental element of value" (p. 55) (how, we might ask, could this apply to truth?), or again when moral value is distinguished from others by the apprehension of what ought to be (p. 187), regardless of the view (which may be right or wrong, but is supported by great authorities) that it is intrinsic to *all* value to come to us with the sense of something that ought to be; or finally, with regard to the main point, which I understand the writer to hold to—the objectivity of the great values,—how is this consistent with the declaration that "the real nature of the universe may have little relation to either our logic or our feeling"? (p. 112). But it would be a mistake to allow any such discontent to blind the reader to the great value the writer has managed to import into what he modestly calls "a cursory discussion" of his subject. The book is written with an ease and grace of style that would put many specialists in philosophy to shame. It is full of penetrating analyses, suggestive observation, and forceful statement of truths that are far too liable to be overlooked. Particularly fresh seems to me the treatment of Moral Good, which occupies Chapters VIII and IX. Ethics has too long been waiting for

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just the sort of treatment we have of it here as merely one department of the wider science of Axiology. If in this excellent section one thing deserves a mark of special excellence it is, I think, the fine treatment of love, defined, in contrast to justice or giving all their due, as giving to each "all that we can," and as a "radiant goodness" that is at once "the Creator and the revealer of values," belonging to "a region in which the sense of claim gives place to the free outpouring of life for its own sake." If, as I hope, I am right in interpreting the note already referred to as meaning that Mr. Badley intends to follow this book up with a fuller discussion of the nature of religion and the Reality which is its object, there are others besides his colleagues in the teaching profession to whom it will be welcome.

J. H. MUIRHEAD.

Indian Psychology: Perception. By JADUNATH SINHA, Professor of Philosophy, Meerut College. (London: Kegan Paul, Trench, Trübner & Co. 1934. Pp. xvi + 384. Price 15s.)

This work, apparently, though not explicitly, the firstborn of more to follow, is to be welcomed as an attempt to parallel what others, German, Italian, and English, have tried to do for European Psychology. The European writers have confined themselves to an historical survey of Western psychology from the date of the breakaway of their subject from philosophy in general. They have left the centuries of non-specialization in psychology to histories of philosophy. Their works are in consequence rather "cuttings" (in garden parlance) than trees. Professor Sinha has sought to give us a "tree." He is fully aware of the fact that never in India has there been our modern specialization in philosophy. He insists that the "Hindu mind is essentially synthetic . . . never destroys the organic unity of a subject." Hence, as a loyal son, he has seen in his task "an exposition and interpretation of the fundamental problems of perception in their logical development." He takes various aspects of perception—physical basis, objects and conditions, recognition, space, time, and movement, the universal, the self, ab- and super-normal perception, etc., and sets one school of thought in each section over against others.

Such a Vergil may make the man he leads a little dizzy:

*Ma io perchè venirvi? o chi 'l concede?
Io non Enzo; io non Paolo sono . . .*

but the result certainly is that he gets more of a purview than if he follows along one path, as I had perforce to do twenty years ago in my little Buddhist psychology.

But the synthetic purview may be attained at too heavy a cost. Namely, the book is not, the author avows, "an historical survey of the subject." This compels him to fix on this or that school of thought at a certain date in a certain region and call that by the general name of the school, Buddhist or other. But it is fairly obvious that every school—none more than the Buddhist—has its history of changing values. By what right, then, is any one stage to count inclusively as "Buddhism"? Or as any other school? It is the weakness of your metaphysician pure and simple that he often fails to allow Time-value for the growing organism of the collective mind, or, better said, for the changing values in teachers of different periods. Indian writers, as synthetic, are peculiarly liable to this myopia, and tend to write of "systems" as so many ready-made boxes of puzzles, each completed at a given date.

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In the next place, when the author claims a metaphysical basis for Indian psychology, and leans upon metaphysic in the perception of the self, he adds that this psychology is also "based on introspection." But if so, is there really any need for metaphysic? Among the data of introspection there is surely nothing more introspectively immediate and inexpugnable than this; that in any awareness of a percept we say: "*I see it!*" "*I hear it!*" etc. *I* perceive it. And that however near some tongues may seem to bring us to just "*see it*" (*tam passāmi, hoc video*), the man-who-sees is *never absent from introspection*. For me it will be a happy day for philosophy when this Privy-Council-Chamber of "metaphysic" gets banished once for all from our mental apartments.

Lastly, a word on Supernormal Perception, where the author rightly places the rapt musing known in Buddhism as *Jhāna*. It is as yet unfortunately characteristic of Indian writers to be uncaredful of what anyone they quote has been publishing up to date. A writer who is good enough to speak of my little work of twenty years ago as "monumental"—(I feel rather like an urn)!—should have taken the trouble to find out what this author has been saying in more recent years. The theory I have been for five years putting forward about the *object of Jhāna* he ignores. It is true everybody else has so far ignored it. So I must say it over again. But not here. Here I do but repeat, it is based on passages in the earliest Buddhist scriptures as yet ignored (in a double sense) by writers on Buddhism. Professor Sinha may say: Well, your theory is not in Buddhist Yogācāra literature. I reply: So much the worse for that—and for you, sir. You are displaying, as Buddhism, a puzzle-box composed of my little immature book and that far, far later literature, and you hold this ill-assorted pair up and say: Here is Buddhist psychology! Now there is plenty of interesting, if very crude, immature psychology in the older books, the Pīṭakas, but the monumental manual hasn't got it all in. There is psychology of a sort in Yogācāra literature, but it had *lost the early Buddhist standpoints*. Here is the price you pay for refusing to make your survey historical.

C. A. F. RHYS DAVIDS.

The Aesthetics of William Hazlitt. A Study of the Philosophical Basis of His Criticism. By E. SCHNEIDER. (Philadelphia: University of Pennsylvania Press, London: Oxford University Press; Humphrey Milford, 1933. Pp. vii + 200. Price 8s. 6d.)

Miss Schneider writes of Hazlitt the thinker, as distinct from the artist, the critic, or the essayist, and her work falls into three main divisions. The first deals with his general philosophical outlook; the second with his theory of art, and in particular of the painter's art; and the last with his theoretical explanation of literature, poetry, and literary criticism.

Who remembers now *An Essay on the Principles of Human Action*, published by a young artist-philosopher of twenty-seven, or the *Prospectus of a History of English Philosophy*, launched by the same dauntless fellow after his first book had issued still-born from the press? Almost no one. It is the unique and admirable distinction of Miss Schneider to have unearthed the obscure roots of the Hazlittian philosophy, and to have introduced its author to the world not, like his other devotees—W. P. Kerr, H. W. Garrod, George Saintsbury, Nichol Smith, or, most recent of all, Virginia Woolf—as a literary connoisseur, a familiar essayist, or a forceful personality, but as a thinker pure and simple.

Versatility at last has received its due of justice. And let no man dismiss

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Hazlitt the philosopher as a mere plagiarist of his friend Coleridge; some ideas, no doubt, were transmitted in the fire of conversation, but the kernel of his philosophy was already ripe before the two had met, and the viewpoint expressed in it is fundamentally Hazlitt's own. Miss Schneider does well to explode a legend that deceived even Saintsbury.

There is something essentially commonsensical and English, something solid and superbly unimaginative, about the philosophy of Hazlitt. He regards religion with the respectful but critical eye of the agnostic, and the rhapsodical theism of Coleridge strikes no chord in his soul; he clips the wings on which philosophy rises towards the infinite and the eternal, and confines its flight to the near-by regions of epistemology, psychology, ethics, and aesthetics.

Miss Schneider calls him a "realist"; and this much-abused term is justified if she simply means that his criticism of eighteenth-century rationalism forestalls in many respects the views of modern scientific philosophy. He refused to believe that the mind is a *tabula rasa* or a mosaic of mental atoms, and notes with finesse the activity of memory and volition in ordinary perception. Steeped in Rousseau—he had shed hot tears over Julie, through the "Confessions" which he loved best of all—he asserts boldly that man is not a purely or even a primarily rational animal, and that "feeling" is an indispensable feature of human personality. He also champions "natural disinterestedness" as against all those, including Hobbs, who were persuaded of the unswerving selfishness of the motives of man.

Miss Schneider rightly affirms that these are the two notions in his general philosophy that bear most directly on his aesthetics. But what a pity she fails to follow up the scent! It would have been so easy to show that sympathetic feeling was the very foundation of Hazlitt's unerring taste in literature, poetry, and painting.

His theory of art is cloaked in the traditional formula, hallowed by a lineage reaching back to Aristotle and Horace, that art does and should "imitate nature." But he rescues it from confusion with anything so inartistic as exact reproduction by the original and profound meaning he gives to "nature"; for this concept is equivalent to reality, and includes that which dwells within as well as without the mind of man, so that "the more ethereal evanescent, more refined and sublime part of art is the seeing nature through the medium of sentiment and passion." Such is the gist of Hazlitt's whole attitude towards the arts.

One would like to mention, besides, his interesting views on genius, on imagination, on taste and its standards, on comedy and tragedy; but space forbids. The authoress is to be congratulated on a monument of thorough, accurate scholarship, an original contribution to our knowledge of Hazlitt that no lover of the great essayist can afford to overlook. But, suggestive as his philosophical ideas undoubtedly are, we cannot subscribe to her view that they represent the last word on aesthetics. We would advise her to pursue the movement of aesthetic speculation from Hazlitt's decease to the present day, paying special attention to Germany.

Her book concludes with two valuable bibliographies; the first, a list of Hazlitt's reading, will go far to dispel the illusion that he was an *ignotus*, while exposing his unfortunate deficiency in German and Greek; the second is an admirable account of his own works and of the general interest taken in him by the literary world. But why does she not include the charming all-round *Selections from Hazlitt*, produced in 1930 by the Nonesuch Press, and furnished with a graceful introduction by Geoffrey Keynes? And why is not the title of her work the "Philosophy" rather than the "Aesthetics" of Hazlitt?

LISTOWEL.

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The Headquarters of Reality. A Challenge to Western Thought. By EDMOND HOLMES. (London: Methuen & Co., Ltd. 1933. Pp. x + 207. Price 5s.)

In this truly pioneer work, short though it be, the author has placed English reading philosophers under no small debt to him. Till to-day our purview of philosophy either has ignored the Eastern philosophers, or has mentioned them only to apologize with Ueberweg: "philosophy could not originate among 'the Orientals,' who were . . . content simply to retain culture in a spirit of passive resignation," and, with Burnet: "they had no philosophy to be borrowed from." It was, I believe, Paul Deussen who, in his *Allgemeine Geschichte der Philosophie* (1906-8), without protest and just as truth which had become evident, opened up for our century a new perspective, and led off by giving us an Indo-Germanic philosophy, where *ātman* of India greets *andrō kaθ' aūtor* of Plato, and in which, as an act, so to speak, of historical revenge, it is Western philosophy which, to be colloquial, doesn't get a look in. Deussen is on our library shelves; Edmond Holmes, readjusting the balance in treatment, writes for Everyman's leisure hour a brief, lucid, most readable examination of the Greek concept of Reality, the mystic's concept of it, and the concept of it gathered by quotations from the Immanence theory of the Indian Upanishads. If this book gets read as it deserves, our cultural curricula will come to be rearranged. Till this is done, the philosophical vista of British youth will get but half-way between West and East, halting at Levantine ports to greet Thales and his brethren, as it still does.

The author's 'challenge' consists in an arraignment of the Greek spirit (as typified in Aristotle) for a 'word-bound sense-bound' contentment with the world of sense-perception as the ultimately real, and with a regulation of man's thought within this world by a triune law of logic, which "is effective just when there is no work for it to do." That is, when we are seeking reality outside the normal visible world, when we have to deal with words as alive and growing in meaning, when we have to be creative in charting perceptions yet uncharted, we find that 'identity' is a shifting quantity, that 'contradiction' cannot deal with opposites, that the 'excluded middle' only serves for a world of word-bound things. Such, too, is syllogism.

My Greek lore is rusty, yet I do not readily admit that Aristotle ever sought more than to guard *consistency* in thinking (not reality) with his 'analytics.' Nor was more than a similar regulation sought, surely, by J. S. Mill in his guarding Inductive thought. But both are concerned with weighing and valuing what is known, what has come to be known. And our author is, with deeper vision, more concerned with reality, as something we are in process of coming to know and coming to be, and as such, is subjective rather than objective. He is more interested in intuition than in intellection. (I miss Bergson in his pages, and would fain see the effect of that genius on his thought.) He is feeling in intuition after a range, stunted in most of us, of other-sense perception. And he finds it necessary to substitute it, where intellectual apperception is too slow, as e.g. in the mental adjustments made by a batsman facing the swift bowler, or a pedestrian crossing a busy thoroughfare. I venture to think he may here be confusing the nature of the two activities. In the flash of intuition, man is creating. He reacts, it is true, to a given conjuncture. But he does not create by way of fusing adjustments $x, y, z \dots$ with such swiftness, that they are as like an act of sense as are the inferent sensations. The act is the man's fiat; the subsequent identification of $x, y, z \dots$ is the expository act of intellection, is a purely reflective operation, and can only be theoretically supposed to have been the mental work preceding the act itself.

The intuition itself is perhaps the nearest we can get to the unseen, not

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yet understood, process which is Reality. And that is 'the man as becoming.' Both East and West have tended to see in reality too much what 'is' in the sense of 'stands still for you to look at it'; too much, to use Bergson's phrase, as 'perches,' too little as the flying. (He said 'flights'; I prefer 'flying.') Reality is a journeying towards the Real, and the journey will take us all our time, and not these few years only. The Upanishads show us Indian culture as feeling after this, but they dropped the quest, and contracted in Yoga. Plato, as representative of the opposite side of Greek thought, felt after it; Gotama called the Buddha felt after it; Hegel, Bergson, Holmes . . . they will the way in the Real (*satya*), that is, in becoming in a More wherein 'the face is set towards' a Most.

C. A. F. RHYS DAVIDS.

The Psychology of Effective Speaking. By T. H. PEAR. (London: Kegan Paul, Trench, Trübner & Co. 1933. Pp. xiii + 232. Price 6s. net.)

That the problems which Professor Pear raises and discusses in this book are of the very highest importance must be apparent to every psychologist who, in spite of his studies, has managed to retain an interest in actual human activities. As Pear is never tired of saying, broadcasting and the "talkies" have made the influence of the voice and of speaking much more obvious and perhaps much greater than ever before in human history. Yet if, having read the book, we ask, "What is Effective Speaking?" it is still not quite easy to find the answer.

At the beginning of his argument, on p. 21, Pear refers to a classification of the functions of speech once made by Professor Grace de Laguna, "Speaking conveys emotion, it issues commands, and it communicates news concerning which no immediate action need be taken." It is perhaps fair to assume that he regards this classification as satisfactory, for he returns to it with appreciation in several other places as well. But so vague a classification obscures a lot of important points. Emotion may be conveyed, as, one perhaps believes, by Adolf Hitler, or aroused, as by an actor who remains perfectly cool in face of a raging audience. Commands may be equally effective though they come by way of delicate hints, by barking insistence, or by conventionally accepted phrases. The eye-witness of an important event may communicate news, and so, in the sense in which the word has to be used here, may the light and cheerful conversationalist. These different cases demand a different technique, and in any one of them the effectiveness of the speech has its own peculiar basis and conditions.

Or take again the two chapters headed *The Criteria of Effective Speaking* and *Getting it Across*. The first makes the following list of Criteria and adds comments: Clear Speaking; Interestedness and Disinterestedness; Suitable Pace; Naturalness; Avoidance of Marked "Dialect," Geographical or Social; Sincerity; Intimacy. It is an excellent list and as long as need be; but the comments are very scrappy and anecdotal, and although I have tried hard, by reading them several times over, I cannot clearly understand what Professor Pear considers to be the psychological bases of, for example, naturalness, sincerity, and intimacy, or how they produce their effects. The chapter on *Getting it Across* is constructed on the same plan, but here Professor Pear merely takes chapter headings from a book by Professor Overstreet and comments on them. It may sound ungracious, but I cannot help thinking here, as at several other points in the book, that if only Pear had dropped some

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rather indifferent pilots and gone out upon his voyage of discovery himself, he would have found landmarks more permanent and important.

At least half the book and the great majority of its thronging illustrations are about broadcasting and talking films. It is an extraordinary thing that a remote voice, often maintaining a long monologue and issuing from an electrical instrument, should yet be able to convey an impression of unobjectionable friendliness. The technique seems to lie somewhere between that of the "old fashioned" public speech—as it is rapidly coming to be called—and the intimacy of face to face conversation. Does the adoption of a friendly voice, or the recognition of the friendliness of a voice, when both speaker and hearers are outside the range of vision and belong to different social groups, set up a reciprocally friendly attitude? This might be a subject for experiment, but if it does, the international character of broadcasting may have some very far-reaching social effects. It may, for example, do more for the establishment of peace in the world than the most elaborately guarded official organizations. Pear hints at this kind of problem many times; I cannot help wishing that he had discussed the matter more thoroughly.

The parts of the book that do not deal with broadcasting seem to me to be less satisfactory. Some of the topics discussed are Effective Speaking in Schools, Debates and Discussions, Lectures and Lecturing, and Humour in Public Speaking. A good many of the arguments seem to assume that everybody, or nearly everybody, ought to be trained for some kind of formal public speaking. The conversation, as a form of effective speaking, gets little consideration, though it is far the commonest and certainly not the least important form. Professor Pear does not much like debates, mainly because he thinks they overstress dialectic and, among other things, lead to a terrible waste of time on public committees. It would be interesting to know whether debaters do actually waste more time on committee than other folks. I doubt it, and the view that they do seems to demand a kind of transfer of training upon which doubt is rightly cast in other parts of this book.

University lecturers are most drastically treated. No doubt many are chosen for reasons which have nothing to do with effective speaking, but my impression is that the bulk of teachers in a University shake down to a style and an audience that meet the needs of their case. On both sides of this perennial controversy more facts are needed, but in the meantime the serious suggestion that young University teachers should be handed over to University Education Departments to be trained to lecture seems little short of fantastic.

The chapter on Humour is full of good fun. Humour is regarded as a very good thing in public speaking within limits. But the limits are not very clearly stated.

I seem to have grumbled my way through this review. This may be partly because Professor Pear, in a chapter on Spoken and Written Style, remarks, apparently with disapproval, that "British psychologists are not criticizing each other." I think this book is like a glass of sherry or a tasty savoury before a meal, or like a brilliant curtain-raiser before a serious play. It is full of notes of interrogation without the answers. It skirts problem after problem and then runs to a new one. I hope lots of people will read the book, and more than anything else I hope that Professor Pear will return to this topic on which his own magnificent gifts as a speaker make him peculiarly fitted to write, and then that he will find the definitive answers to many of the very vital questions which here he sets before us.

F. C. BARTLETT.

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Religion and Communism. By JULIUS F. HECKER, Ph.D. (London: Chapman and Hall, Ltd. 1933. Pp. xii + 303. Price 8s. 6d. net.)

In this volume the writer gives on the whole an adequate and interesting and, as far as my knowledge justifies a judgment, an accurate account of the relation of Communism in Russia to Religion. In the first chapter he states the problem: a brief historical survey leads him to the conclusion that Communism is opposed to religion as such, not only to the abuses of a reactionary religion, but even more to "any of its modernized and philosophically improved forms" (p. 11). In the following three chapters he describes the religion of the people, the relation of Church and State, and Nonconformity in Russia. It is an appalling picture of superstition, corruption, and oppression which he paints. Orthodoxy was so close an ally, and so servile an agent of autocracy, that revolt against the latter led inevitably to the rejection of the former. The fifth chapter deals with the beginnings of the anti-religious tradition. Here the author deals more fully than seems to me necessary for his immediate purpose with the Foreign Sources of Russian Atheism, as he is covering already well-known ground. In Chapter VI he passes to deal with the first encounters of Religion and the Revolutionary Movement. Not all the intellectuals who were forced to abandon the teaching of the Church surrendered religion altogether; the seventh chapter deals with the "God-wrestlers" and "God-seekers" among the Intellectualists. The movement of the *Neo-Christians*, the opponents of Communism are sympathetically described; but their failure to stem the tide is marked. A brief but clear account is given in the eighth chapter of Tolstoy's Religious Anarchism.

With the ninth chapter we pass to the present conflict. The Communist Theory of Religion is described. Its antecedents are stated in one sentence: "German Hegelian philosophy merged with the French materialism through the influence of Feuerbach, who interpreted religion anthropologically and prepared the ground for the Marxian development of Dialectical Materialism," in which Marx gave to religion "a social-economic interpretation characterizing it as 'the opiate of the people' " (p. 174). Not only was there thus a theoretical opposition between Communism and Religion, but, as Chapter X shows, the Russian Church identified itself with the old order of Czarism, and challenged the new order of Communism. Inevitable was the conflict of the Church with the Revolution; and the Church played its game so badly that it lost. Of the compromise in the Living Church movement a more sympathetic account is given than is usually allowed to reach us here in Great Britain, as many of the losers in the game are as exiles carrying on an active propaganda against it. The Sobor (the Supreme Church Council) of 1923, under the control of this party, "assured the Government of its undivided sympathy and loyalty, declared capitalism a deadly sin, and pronounced the social revolution just. In this way it annulled the anathemas of the previous Sobor, and recognized the decrees of separation of Church and State, of nationalization of Church property, and even these limitations on the rights of citizenship which were imposed upon the clergy and the Church as a punishment for counter-revolutionary activities" (p. 213). This submission has not saved the Church from further oppression. Since 1929 all social activity or religious propaganda of the Church is forbidden, as is the education of youth in religion; only worship is allowed, although under many pretexts hindered.

On the contrary, the next three chapters give the record of the anti-religious movement, show how the collectivization of industry is made to subserve the atheist propaganda, and how thoroughly the anti-religious propaganda is being organized, and how effective are the methods adopted. The author

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shows, however, that, despite these seeming advantages, there is a waning interest among the young in the anti-religious movement, and that "the constructive programme of the Five-Year Plan" is absorbing their interest. "The more thoughtful," he says, "are beginning to ask the eternal questions of 'whence' and 'whither,' and have not received satisfactory answers. The old anti-clerical agitation does not appeal to them any more, they desire something more constructive and interesting, and in this respect the anti-religious movement has so far failed to meet the demand" (p. 223). What I miss in this otherwise competent record is a more adequate recognition of the severity of the persecution of ministers of religion, the hardships and sufferings imposed on them under the pretext that they are not discharging any socially useful function, and the constant pressure on the people to abandon their religious belief and worship—facts of which there is ample, trustworthy evidence.

In the last chapter on the Outlook the author states his own conviction that there is no future for the former established Church of Russia, although it may linger longer than its Communist opponents expect, nor yet for the Evangelical Sectarians, because of their fundamentalism, their refusal to adapt themselves to the new situation. Indulging in prophecy he forecasts the probable future thus: "Step by step, in place of the abandoned cults and traditions, the new life creates its own social and cultural forms. We see, therefore, no reason why the former institutions of organized religion should not disappear altogether and be replaced by something new, a higher synthesis in form and content of the obscure cults and ideologies of the past. A few centuries hence historians and sociologists, in analysing the superstructure of classless society, will point out that there are many survivals, rudiments and developments of what once used to be called religion" (p. 271).

Recognizing the value of the volume as history, I shall close by discounting the author's prophecy by two comments. It is not so certain that the present economic social order in Russia will endure throughout the centuries. It is not so improbable that a revived and reformed Christianity of the Orthodox Russian type may again win the mind and the heart of the Russian people; for this many outside as well as within Russia are working, praying, and hoping. Which of these alternative anticipations the reader will be inclined to adopt will depend largely on the estimate of value he forms of Communism on the one hand and Religion on the other. Mine is not the author's.

ALFRED E. GARVIE.

Science and God. By BERNHARD BAVINK. Translated by H. STAFFORD HATFIELD. (London: G. Bell & Sons, 1933. Pp. ix + 174. Price 5s.)

This little book is weightier in thought and suggestion than its slight bulk would indicate. It sketches in a lucid manner the world-picture of the classical physics, traces the events which led to its collapse, and outlines a "programme for the solution" of certain central philosophical problems in the light of this scientific revolution.

The conclusion drawn from physics is that the world consists of "completely independent units of action," and therefore that no *laws* concerning the behaviour of these or of macroscopic objects can be established. The scientist as such asserts that these "actions" are undetermined, or a matter of "pure chance" (p. 118), but on other grounds he is at liberty to say that they are "freely determined" by God, and that their nature is spiritual (analogous to our acts of will). The author does so conclude, thus tentatively resolving the "most indigestible of all our philosophic problems" (p. 21).

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The most important suggestion of the book is that these actions exist only as elements "of a more comprehensive Gestalt or form, which alone would have real existence" (p. 111). A hierarchy of such forms is thus postulated in which the highest are individual and unrepeatable—and so incalculable. This is the basis of life and freedom, which can thus be accounted for without "bad vitalistic reasoning." For the effective study of a universe so constituted a Gestalt mathematics is required (of which the rudiments are already provided in the "newer logic").

The doctrines of the "free determination" of the unitary "actions" by God, and of a hierarchy of "forms," are not effectively integrated, but the author sees clearly that this problem leads immediately to that of God's will in relation to such other wills as may be operative.

Obviously these matters cannot be discussed here, and the issue most sharply raised—namely, that of causation—concerns not this book only but the whole of contemporary philosophy of science. Perhaps it may be observed, however, that in just this case (of the causal principle) the physicist's generally justifiable habit of denying the existence of what he cannot observe or deduce may be out of place. This principle is certainly not observed or deduced, but is the presupposition of both, and our final inability to calculate the behaviour of "Planck's h " (or the unit of action) may not—as Planck himself argues—affect the question as to the validity of this principle.

Certain of the author's observations on contemporary theology are wise and timely; but some passages and phrases—e.g. about Aryans, Bolshevism, etc.—accord so well with the present temper of Germany as to seem quaint in cool English print.

RALPH E. STEDMAN.

Life Beyond Death in the Beliefs of Mankind. By JAMES THAYER ADDISON.
(London: George Allen & Unwin Ltd. 1933. Pp. x + 300. Price 8s. 6d.)

Mr. Addison has collected from manifold sources the leading types of belief in life after death. About a third of the book is given to primitive faiths and the remainder to the beliefs of the more developed religions, treated comparatively by grouping the teaching round the various ideas embodied in these faiths, such as heaven, hell, judgment, transmigration, and so forth. His objective is the general reader, although the book will perhaps be of most service to theological students and others preparing for examinations in the Comparative Study of Religions. The first part is work of a kind that has been done much more fully by Sir J. G. Frazer and others, but in the larger works the amassing of evidence sometimes bewilders the more casual reader, and Mr. Addison's shorter account may be more valuable to them. It is well done, considering the limitation of space, and presents a representative account of the chief types of belief in primitive races.

The second part is commendably impartial, even where the controversial is touched upon, as in the case of the doctrines of purgatory and indulgences. The chapter on belief in hell shows what unimaginative dullards the Western literalists have been in comparison with the thought of the East, which has invented hells of every type, hot and cold, and torments that make the European mediaeval hell a health resort in comparison! Naturally, heaven is made to match on the opposite side, whether it be the Sultan's palace of Muhammad, or the Pure Land of Amitabha Buddha.

Mr. Addison has succeeded in marshalling his array of material in such a manner that justice is done to all the leading religions, and in providing a

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good bibliography has made further study easier. It would not be difficult to point out omissions, and occasionally one might criticize the importance of some of the passages cited, but judging the book by what it offers, it must be admitted that it has succeeded in giving what it intended in a manner that may justly be called admirable, and one congratulates Mr. Addison accordingly.

E. S. WATERHOUSE.

Modern Tendencies in World Religions. By CHARLES SAMUEL BRADEN, Ph.D.
(London: George Allen & Unwin Ltd. 1933. Pp. xi + 343. Price 10s.)

Such a book as this must necessarily soon be outdated, but at the moment it is full of interest. It is said by some that the awakening of the East is superficial, and that below the surface things are unchanged. Dr. Braden's book will not be found to confirm that view. He deals with Islam, Hinduism, and Judaism, as well as the religious life of Japan, China, and Russia, and finds everywhere the ferment of ideas. In some cases nationalism is a factor, for racial pride is touched when the religion inherited from the fathers is patently out of line with progress, as in the case of the position of child wives and widows in India. Islam in Turkey has suffered because it has proved a barrier to the Westernization of that land. Japan seems inclined to a composite notion of religion mingling Shinto, Buddhist, and Christian ideas, if we are to judge from some of the authorities quoted. But the real difficulty in assessing Dr. Braden's book is just this question of authorities. It would be misleading if the currents of thought in the Church of England were judged simply from one of the papers which represent its various bodies of opinion, and one thinks that some of the articles quoted by Dr. Braden represent few beside their authors. No one man can have personal acquaintance with so many different faiths, and Dr. Braden and his readers must accept much that is said here as subject to revision. Yet, even so, the book is singularly readable and interesting. Not the least important chapter is that which deals with Russia. No one knows precisely what is happening to religion there. The Japanese Government, in its fear of communism, has tried hard lately to encourage religion, just as Russian communism has tried to destroy it. That the atheist policy of the Soviet has had some success is undeniable, but unless it can make a record in history by substituting the State for God, its difficulties are yet ahead. Dr. Braden's book affords abundant material alike for the student of religion and of sociology, and deserves the attention of both.

E. S. WATERHOUSE.

The "De Sacramento Altaris" of William of Ockham. Edited by T. BRUCE BIRCH, Ph.D., D.D., Professor of Philosophy in Wittenberg College. Latin Text and English Translation. (Burlington, Iowa: The Lutheran Literary Board, 1930. Pp. xlvii + 570.)

In the Introduction we have a brief account of Ockham's life, a still briefer account of the MSS. and printed editions of his work *De Sacramento Altaris* (or *De Corpore Christi*, as it is called in the Balliol MS.), and a long series of quotations from modern writers setting forth their opinions of Ockham, his importance, and his influence, especially on Luther. A page from the printed edition, published at Agrigentum in 1491, is reproduced. Also a page from

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the Balliol MS., which is in the reproduction quite illegible, whereas the MS. itself is in excellent condition and by no means illegible.

The text is based mainly on the printed Strasburg edition of 1491 and on the Balliol MS. 299. The passages which I compared with the manuscript agree word for word with the original. The critical apparatus is printed at the end of the book, together with the notes and a long and useful bibliography.

The chief merit of this edition of Ockham's treatise on the Eucharist lies in the text, which has hitherto been accessible only in MSS. and in black letter editions full of abbreviations and difficult to decipher, save to the expert. Though the work purports to be theological, its groundwork is philosophical. We have in it a clear account of Ockham's views on mathematics and on quantity, of conflicting theories which he repudiates, and of the bearing of these philosophic doctrines on the doctrine of the Real Presence. Incidentally, Ockham stands revealed in it as an original, but not as an unorthodox, thinker; for, as the editor remarks, there is "a ring of sincerity in all his declarations of belief in the fundamental doctrines of the Church." He accepts the Church's teaching on the Eucharist, but seeks to simplify the philosophic interpretation of it, which in his view is unnecessarily cumbrous. Nowhere is the application of his famous "razor" more plainly manifest than it is in this interesting work.

The chief defect of the edition is in the translation, which is full of mistakes and is often quite misleading. *Nulla modo* is rendered by "in no mode"; *simul* is translated "at the same time" even when it refers to magnitudes which are coincident; *inexistens alteri*, which means to exist in something else, is translated "non-existent to another"; parts which *nec faciunt aliquod unum* are said "not to make some one"; *natum* with the infinitive is translated "created to"; *unum per accidens* = "one by an accident"; *sine omni mutatione* = "without an entire change"; *anima intellectiva* = "rationable soul"; *contingere* is translated by "to touch," even though the context makes it clear that it means "to happen"; and so forth, not only in words and phrases, but in whole sentences, which make Ockham appear to be talking nonsense, whereas in reality he is at least trying to talk sound sense.

LESLIE J. WALKER.

Psycho-Analysis and its Derivatives. By H. CRICHTON-MILLER, M.A., M.D. M.R.C.P. (London: Thornton Butterworth Ltd. 1933. 1p. 255. Price 2s. 6d. net.)

This book meets a definite need. Psycho-analysis has successfully survived that initial period of intolerance and persecution which is apt to be the fate of any new ferment of thought sufficiently powerful to compel adaptations in other branches of knowledge, and it is time that the man in the street should be able to acquire a good general idea of what it is all about. The series in which this book appears has that particular aim, and it may be said at once that this book is fully up to the general standard of the Home University Library. The subject is particularly difficult of condensation, but a clear account is given of the three main theories—of Freud, Adler, and Jung—and in spite of the stress laid on their differences, a newcomer to the subject will gain a strong impression of the richness and permanence of the soil which has already produced three such varying theories. A liberal use is made of quotations, which are aptly dovetailed into the text, and greatly assist the march of the arguments. The book should be of especial service to the medical profession, since owing to the absence of any provision for a

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training in psychology, they must, in the mass, unfortunately be still regarded as members of that public for whom the book is primarily designed.

J. H. SHELDON.

Crime, Law, and Social Science. by JEROME MICHAEL, Professor of Law in Columbia University, and MORTIMER J. ADLER, Associate Professor of the Philosophy of Law in the University of Chicago. (London: Kegan Paul, Trench, Trübner & Co. 1933. Pp. xxix + 440. Price 15s.)

This is a treatise, written at the request of the School of Law of Columbia University, to determine whether it is desirable to establish an institute of criminology and criminal justice in the United States, but the considerations urged and the conclusions reached are of equal importance to the criminologists of this country.

A protracted investigation, conducted with exhaustive patience into the problems of crime, based upon practical and theoretical knowledge, results in certain conclusions as follows: First, that there is no scientific knowledge in the field of criminology; no knowledge of the causes of criminal behaviour exists, and psychology and sociology have not yet developed anything more than what the author calls "raw empiricism."

After the premature generalizations of Lombroso and other *a priori* writers, this is surely a refreshing modesty!

But, secondly, the authors hold that we have some knowledge descriptive of the processes and institutions of criminal justice—we have learned that the notion of retributive justice is untenable and that criminal law should be directed towards social good and not toward punitive retribution. Offenders should be divided into three classes, incorrigible, corrigible, and potential.

To construct a science of criminal law, where science is now absent, as well as such a science, historical and controvertive studies of criminal law are essential, and therefore the authors favour the establishment of an institute devoted to research both theoretical and empirical.

Common-sense knowledge has proved itself inadequate to cope with the practical problem of controlling crime—that is to say, new historical records and statistics do not really assist to prevent the growth of the criminal mind.

In conclusion, the authors are driven to the view that the department of psychology dealing with crime and criminals is non-existent, and that the whole task remains not only to be completed but even to be begun.

It is typical of a certain modern approach to these problems that in the index neither the word "sin" nor the word "religion" appears. This is not due to any insufficiency in the index, but arises from a complete absence in the text of any theological consideration of crime and wrongdoing. A painstaking but essentially uninspired book.

HENRY SLESSER.

The Structure of Our Apprehension of Reality. By C. LAMBEK. Translated from the Danish by AGNETE KORTSEN. (Copenhagen: Levin & Munksgaard; London: Williams & Norgate, Ltd. 1933. Pp. 95. Price 4s. 6d. net.)

This work by a Danish writer who has for more than thirty years carried out investigations into the structure of the psycho-physiological processes aims at the exposition of the necessity and nature of a dynamic approach to the study of our apprehension of reality. Regarding cognition as an endeavour to master future experience, he insists upon the epistemological

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importance of the fact that we are living beings who in need of controlling future experience require an apprehension of reality and cannot abandon an inquiry into real coherence. The essay, though modest and unpretentious, and though presumably only a preliminary epistemological effort containing promise of further elaboration, is valuable because of its attempt to examine notions that play an important part in life and knowledge, and to shape and appraise philosophical issues in accordance with its dynamic standpoint.

B. M. LAING.

Conversion: the Old and the New in Religion from Alexander the Great to Augustine of Nippo. By A. D. Nock. (London: Oxford: Clarendon Press; Humphrey Milford. 1933. Pp. xii + 309. Price 15s. net.)

Such a volume as this—so wide in its learning, so clear in its style, so well-arranged in its matter, so competent in its handlings—claims grateful welcome and confident recommendation. My only criticisms are that the title does not adequately cover the varied contents, that the Notes are relegated to the end, and that for me at least the attitude of the writer seems too detached. To whet the appetite of the reader, the Contents, of which there is a good Table, may be briefly indicated. After in the first chapter distinguishing Conversion as a thorough change of mind and life from social acceptance of the current religion and adhesion to a new cult without abandonment of the old, this idea of conversion is shown in the second chapter to be absent from Greek religion before Alexander the Great, an absence typical of the Greek mind. The conquests of Alexander are in the third chapter shown to have led to closer contacts of Greeks and Orientals, and consequently to "the creation of new mixed forms of worship." The same result followed from the opposite current, described in the fifth chapter: "the migration of Orientals and orientalized Greeks into great cities." Similarly, as Chapter V shows, was the path to Rome taken by such Eastern cults; but here there was more State control and more Romanization. How these travelled to Rome is described in the sixth chapter. Chapter VII discusses the Appeal, and Chapter VIII the success of these cults. They had the attraction of novelty; they promised divine protection in the larger and stranger world presented in expanding knowledge; they afforded some assurance regarding the hereafter; and they gratified the inquisitiveness about the supernatural and the desire for revelation. An instance of what may be described as a conversion is offered in Chapter IX, that of Lucius as told by Apuleius. The Last Phase of Paganism—conversion back from Christianity—is illustrated in the tenth chapter in the cases of Porphyry, Julian, and an unknown senator. The following chapter, the eleventh, should have special interest for the readers of this Journal, as it deals with the more frequent instances of conversion to philosophy. "Philosophy held a dominant place because (1) it offered intelligible explanations of phenomena; (2) it offered a life with a scheme, a discipline, and a goal; (3) it produced the saints of antiquity; (4) it had the influence of the living teacher; (5) it made a literary appeal" (pp. xi-xii). Passing in the last three chapters to Christianity, the author first describes the spread of Christianity as a Social Phenomenon, next its teaching as viewed by a pagan, and lastly three types of conversion, Justin, Arnobius, and Augustine. Its success he ascribes to its power to satisfy the current religious needs, as indicated in the previous chapters, rather than to "the human personality of Jesus as portrayed in the Synoptic Gospels." While most of its doctrines were intelligible to the thought of the age, the idea of incarnation did seem strange, as also the doctrine of the

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resurrection of the body. "In general, Christianity could be represented as the cream of the best thought of antiquity" (p. xii). The mass of the material included can be commanded by the use of the excellent Index. The treatment throughout is so objective that it would be difficult to ascertain whether the author himself accepts the Christian faith or not. His last sentence would at least appear to negative any such assumption: "'Here we have no final revelation of truth,' said John Inglesant, and this applies to any of our attempts to follow the history of man's gropings after ultimate reality just as fully as it must needs to those gropings themselves" (p. 271).

ALFRED E. GARVIE.

Science and the Spirit of Man. By JULIUS W. FRIEND and JAMES FEIBLEMAN.
(London: George Allen & Unwin Ltd. 1933. Pp. 336. Price 12s. 6d. net.)

"There are symptoms on all sides that the modern cosmology has reached the zenith of the possibility of its accomplishment and is already at the beginning of its decline. Never was empiricism more desperately defended; never was positivism more clamorous. . . . Yet despite the clamour of empiricism, faith is falling away from salvation by the control of physical nature, and also from subscription to irrational action. In the affairs of Western man, as empiricism is about to fall and nothing yet crystallizes to take its place, confusion is the burden and despair sets the moral tone. In physical science developments have taken place which call for a departure from empiricism, the very emotional substance by which science was nurtured, and for which it seemed to stand" (pp. 120-1). The present book is an attempt in a situation thus envisaged to push over the old fabric of cosmology and provide a map to help the new order on its way. But, just as the view attacked would be better called "naturalism" than empiricism, what the authors wish to put in its place is not anything that would ordinarily be described as a variety of rationalism, but rather a form of pragmatistic humanism strongly opposed to physical realism. However, although the book is in some respects very well and even brilliantly written, it is far from easy to discern the precise views expressed owing to a constant vagueness in the use of language. The authors employ words like "significance," "value," "concept," without showing any sign of having made up their minds precisely what they mean, and thus pass unjustifiably from the proposition that these are *in some sense or other* involved in the determination of what is objective to the proposition that all science and all the facts of nature have objectivity only relatively to human needs or human values. (It is surely an extravagantly loose way of speaking to describe, *e.g.*, sense and time indiscriminately as "values.")

This is not to say that the book is without many instances of fine philosophical insight and many suggestive points that might bear excellent fruit if further developed and clarified. The second chapter (on "The Historical Background") gives a fine bird's-eye view of the whole development of thought in certain respects, though it is very misleading to treat the subject as if the idealist school never existed and as if the history of modern thought were reducible simply to the progressive triumph of naturalism. The third chapter consists of an argument to show that recent scientific theories, especially the relativity theory, make physical realism impossible. It is ably argued, but the authors pass too rapidly from results valid for science to results valid for philosophy, and at several points there seems to me to be a *non-sequitur*, as in (a) the transition from the proposition that a characteristic can only be measured relatively to standards of reference to the proposition

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that it can only exist thus relatively; (b) the assertion that causal laws are truisms following from a definition; (c) the transition from subjectivism about the physical world to the conclusion that no true theory can come in conflict with "the most basic human needs" or "insult human dignity." (I think the authors are here again misled by the ambiguous word "value.") No doubt there were some arguments in their minds intended to establish these conclusions, but such are not elaborated. In Chapter IV, on Psychology, they ably reassert the place of reason in human life, while denying that it can be an end-in-itself, and emphasizing the progressive and partial character of truth. This chapter contains many points of value. The last and more metaphysical chapter, while it suffers from the defects mentioned above, again contains fine passages and highly suggestive ideas, especially in the account of art and religious experience. While we must once more protest against the careless use of language and the too frequent occurrence of vague rhetoric, the book as a whole is an inspiring, if uneven, essay on philosophy, containing some fine ideas, and we might look for much from the authors if they would train themselves to make up their mind what they mean by words and use them precisely.

A. C. EWING.

The Meaning and Truth of Religion. By EUGENE WILLIAM LYMAN. (New York and London: Charles Scribner's Sons. 1933. Pp. xvi + 468. Price 12s. 6d. net.)

The purpose of this excellent volume, which I have read with great interest and almost entire accord, and which I can very warmly recommend, is timely. "The task of reconstructing our whole social order is upon us, and there is imperative need for such an interpretation of religion as will make clear its relevance to that task" (p. ix). While this practical purpose is kept steadily in view, the theoretic discussion is no less thorough on that account, but adequately informed and competently discerning. In the Introduction this purpose is more fully discussed; and the following three parts deal with Religious Experience, Religious Knowledge, and Religious Beliefs and their Rational Grounds. The first and second parts exhibit the meaning, and the third the truth of religion, or its value and its validity.

Religion, it is claimed, is fitted for the task assigned to it, because, when it is not merely conservative but creative, it can produce courage, reason, and love (p. 16), and so can prove itself a creative energy. Religion can deal with the present social problems, as it by memory preserves its past inheritance, enters by experience into the possession of its present resources, and on these bases its future expectations. "Men of the present may be inspired with such creative faith as will enable them to deal victoriously with the problems of war, of social justice, of race relations, and as will give them open-mindedness and resourcefulness for each of the social problems with which they are confronted" (p. 47). The vital characteristics of religion are "an experience of *kinship* with a human group" (p. 53), of "*power* (inspiration, enthusiasm, newness of life)" (p. 56), of "*insight* into truth and value" (p. 60), of "*integrity* (salvation)" (p. 63), by "the way of loyalty and obedience" (p. 65), "the way of realization" (p. 66), "the way of transformation" (p. 67), "the way of wonder" (p. 68), which is creative of "beauty in the presence of the mysteriously meaningful" (p. 69). The definition of religion resulting from this analysis is that "religion is an experience of kinship with the Deepest Reality in the Universe, and hence of membership in an infinitely meaningful

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world and of sharing in an ever-unfolding life" (p. 74). Space forbids as close an analysis of subsequent chapters, but this will indicate the writer's method.

One chapter discusses the relation of religion to ethics, and another to mysticism. Christianity is recognized as creative religion because it synthesizes the four types of religion: the ethical, the mystical, the aesthetic, and the philosophical; it relates goodness, truth, and beauty to the reality of God. That religion can claim to be the way of truth is shown in the second part on Religious Knowledge: first, the right of religious faith alongside of scientific inquiry is established; second, the relation of value and validity is shown; and, third, a place is claimed for intuition, not as a rival to but as an ally of reason.

This claim is further discussed in the third part, which seeks to show that there are rational grounds for religious beliefs in God, in Man and his Ideals, and in a Spiritual Universe. Naturalism and Pantheism are both rejected and Theism is accepted. It is shown that the new cosmology is not hostile but rather favourable to Theism. Evolution can be so reinterpreted as to lead to Theism, and so can Human History. Human personality can be so conceived as to justify the affirmation of liberty and immortality, and its ultimate values can be related to ultimate reality, since for the Problem of Evil such a solution can be found as justifies faith. The two extremes of the assertion of the transcendence of God and of the emphasis on His immanence must be avoided. "The counterpart of the insight that God is both transcendent and immanent is the conception that the universe is spiritual in respect to its ground and at the same time presents to all finite spirits a great task of spiritualization. . . . The comprehensive goal for this creative synthesis we may best apprehend as the Building of the Beloved Community" (pp. 436-7).

The writer thus gets to the goal of his practical purpose. "A faith which discovers that the transcendent God, who is the ultimate creative ground of the universe, and whose inherent nature is Truth, Beauty, and Goodness, is also immanent in human aspirations and idealistic strivings, and is most fully manifested in human personalities completely dedicated to the building of the Beloved Community, cannot be other than the supreme spiritual dynamic. . . . Such a faith can make religion both the supreme way to spiritual fulfilment and the supreme spring of spiritual power for mankind through the ages" (p. 456). It has been impossible to show in detail how solidly the conclusions indicated are based on adequate up-to-date knowledge, and how competent the author has proved himself for his task. Amid the doleful voices in the present distress, it is refreshing and cheering to meet with the intellectual confidence, moral courage, spiritual reliance of the "creative faith" of the author, which I fully share with him, and for the confirmation of which by him I am truly grateful.

ALFRED E. GARVIE.

The Psychology of Infancy. By VICTORIA HAZLITT, D.Litt. (London: Methuen & Co. 1933. Pp. ix. + 140. Price 5s. net.)

During the last few years a very large number of books have appeared dealing with the early development of children, so that we probably now know more in detail about the first three years or so of the child's life than we do of any other period of human existence. It is clear that Dr. Hazlitt had made a very exhaustive and critical study of the literature up to the time of her death, and as the books that have been published since that time have made little alteration in the general picture, Dr. Hazlitt's attempt

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at a synthetic and critical study remains of great interest and value. Dr. Margaret McFarlane, who has edited this book with great care and efficiency, points out that it is based not only on a study of the existing literature, but upon much first-hand observation, and no instructed reader could doubt this fact. But no parade is made of the patient original investigation that must have gone into the making of the book. Dr. Hazlitt seems throughout more willing to give credit to others than to assume it for herself.

The book deals first with the development in the child of sensorial and muscular control, then with the acquisition of walking, speech, and other habits, next with the growth of the higher mental processes, and finally with the architecture of character. Throughout Dr. Hazlitt never expresses an opinion without giving the facts upon which her opinion is based, and never criticizes another writer without a careful consideration of the concrete evidence that is available. Perhaps in consequence of this admirable caution her general notion of the psychology of the young child is neither quite in line with the view that growth comes by the building up of more and more complex structures and reactions out of originally discrete elements, nor with the view that the earliest reactions and objects are already organized. Further, while she is fully alive to the importance of active and seeking reactions she is somewhat sceptical in regard to many of the more extreme Freudian formulations.

Undoubtedly in various ways and places the book remains incomplete. One feels that Dr. Hazlitt would have added much both to the critical and to the constructive value of her treatment had life afforded her the opportunity. Particularly is this the case in her most suggestive discussion of recognition, memory, and thinking. She here seems to me to get far nearer than most people have done to the actual mental processes of the infant, and it is greatly to be hoped that some students who knew and were attracted by her way of approach will carry her hints much farther than she was able to do.

The book was well worthy of publication. It will stand as a record of what a thoroughly level-headed and competent psychologist can do in this field. I think that probably more than any other work by its author it will bring home to us how great a loss British psychology suffered by her untimely death.

F. C. BARILETT.

The Organism of the Mind. By G. RICHARD HEYER, M.D. Translated by Eden and Cedar Paul. (London: Kegan Paul, Trench, Trübner & Co. 1933. Pp. xiii + 271. Price 15s.)

This book, which is described in the sub-title as "An Introduction to Psychotherapy," is not so much an introduction to psychotherapeutic practice as an exposition of the principles upon which psychotherapy should, in the author's opinion, be based. The book falls into two parts, of which the first is devoted to "organ neurosis," i.e. psychogenic disturbances expressing themselves characteristically as impairments of bodily function. From his study of this class of symptom the author concludes that "the bodily and mental worlds are not two distinct fields of being (a false assumption which has given rise to such fundamentally erroneous theories as that of psychophysical parallelism, that of reciprocal action, etc.)." "It behoves us," he continues, "to regard 'mind' and 'body' as merely two phenomenal forms of one and the same 'life.'" Life is regarded as manifesting itself in a series of psychophysical 'cycles' or 'spheres' corresponding to the level of development or phase of differentiation reached. These cycles, which correspond both to historical phases of organic evolution and levels of animal life, are represented

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in the individual not only as stages of development but also as layers of mental structure. Dr. Heyer recognizes four great 'cycles' constituting a hierarchy in the human organism, viz.: (1) the vegetative cycle of nutrition which manifests itself particularly in the gastro-intestinal functions; (2) the animal cycle of circulation, which mediates the dynamic 'thymic' world of impulse and in particular of sexual impulse; (3) the pneumatic cycle of respiration, in which the polarity of rhythm already established at the circulatory level reaches consciousness, and in which the "spiritual" (N.B. *spiritus*) is foreshadowed; (4) the truly mental cycle associated with the higher differentiation of the nervous system—a cycle which is only as yet feebly represented in the life of modern man. The organic neuroses are regarded as expressions either of undue repression of the urges belonging to the lower vital cycles or of undue surrender to them on the part of the spiritual ego. This type of interpretation is reminiscent of the Freudian concepts of 'fixation' and 'regression,' but Dr. Heyer rejects the sexual orientation of Freud's "libido theory."

The second part of the present volume is devoted to the consideration of psychotherapeutic methods. The theories of Freud, Adler, and Jung are each considered in turn, but no systematic exposition is attempted. A tribute is paid to Freud as the pioneer whose researches into "depth psychology" have laid the foundation of modern psychotherapy, and dealt a death-blow to the barren rationalism of the nineteenth century by revealing the non-rational basis of life. The author feels, however, that, by surrendering to the reductive "nothing but" method of analysis, Freud failed to rise above the limitations of "the bourgeois century." Freud is also criticized on the grounds that, while appreciating that life is based upon non-rational instinctive urges, he recognized no basic urges except those belonging to the sphere of sex. This, of course, is unfair to Freud, whose main endeavour during the past ten years has been to emphasize the basic function of the aggressive impulses. It is surprising that Dr. Heyer should have completely ignored this characteristic aspect of Freudian thought—particularly in view of the importance attached to the concepts of 'rhythm' and 'polarity' by Dr. Heyer himself. One might have expected the Freudian antithesis of 'love-hate' to have appealed to a writer who attaches such importance to the polarities of 'systole-diastole' (cycle of the circulation) and 'inspiration-expiration' (cycle of the respiration), and who finds the keystone of his system in the notion that the development of life out of the *prima materia* has been inseparably accompanied by the formation of polar opposites. However, it is to Jung rather than Freud that Dr. Heyer looks for his inspiration. Whilst denying that his book is an exposition of Jungian doctrines, he admits that his own system of thought "has grown out of that of Jung and has been fertilized by his ideas." It would appear that he has also been directly influenced by Oriental thought quite apart from the Oriental influences mediated by Jungian psychology. Such influences explain the mystical atmosphere which pervades the book and which manifests itself in the author's interpretation of the numerous drawings of patients, which are reproduced in an appendix. It is characteristic that Dr. Heyer should consider the objective methods of modern science as inadequate for the understanding of mental processes and as requiring to be supplemented by intuitive appreciation.

In general the book is interesting and stimulating; it is well worth reading if only for the glimpse it gives into the vast fields which the study of psychogenic disease opens out to investigators who possess psychological and philosophical insight as well as medical qualifications.

W. R. D. FAIRBAIRN.

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Psychical Research. By Professor HANS DRIESCH. (London: G. Bell & Sons, Ltd. 1933. Pp. xvi + 176. Price 5s.)

Such scanty interest as is accorded to the subject of *Psychical Research* by the majority of scientists and philosophers is wont to exhaust itself in asking the mere initial question: Is there, indeed, any reliable evidence in the matter at all? And this question too often remains without a definite answer. One cannot expect an analysis of the evidence to be undertaken in a book whose avowed aim it is to deal with the methodology of the subject and to act as a guide to the experimenter; but one is well rewarded in finding an outspoken expression of the author's opinions on the evidential question together with the conclusions which he draws from them.

Professor Driesch has divided his book into two main sections. In the first of these he enumerates and classifies the various forms of deception which have to be encountered and overcome; while in the second he discusses the theoretical headings under which the phenomena fall. If we agree with him that telepathy is a proved fact, his argument shows that a deep and far-reaching philosophical importance attaches to it. "We have," he says, "spontaneous telepathy as a quite certain fundamental phenomenon. Nobody who has thoroughly studied *Phantasms of the Living* (Gurney) and its supplements, as well as the remaining good literature, can doubt it." And in the following pages he proceeds to demonstrate the failure of any attempt to explain telepathy on a physical basis. Exhibiting, as it does, an independence of distance, and a selectivity so complete as to exclude as percipients all individuals except the relevant person; and transmitting (if the word is permissible) its meanings unclothed in any discoverable form of symbolism, it differs essentially from any physical method of communicating ideas.

This fact necessitates the hypothesis of a "mental field"—"a non-spatial connecting framework for many souls, a framework which must now, however, be expressly valid as a field for *single causal* happenings." Such a non-spatial and non-sensuous type of interrelation (which, as Professor Driesch holds, is foreshadowed by the *entelechy* of his vitalistic biology), he thinks to be sufficient of itself to refute the theory of psycho-mechanical parallelism.

There arise, however, further facts and difficulties out of the "metagnomie" acquisition of the contents of other minds, and these drive us, so the author holds, to a choice between two ultimate hypotheses. We must either postulate the existence of a universal, supernormal *subject*, which "contains in itself all the plans of the lives of all human beings," and to which the sensitive or "metagnome" has access; or we must accept the spiritualistic theory of personal, post-mortem existence and action, to which he prefers to give the name of "Monadism." These theories make about equal claims on conceptions which are new to science, and the final choice between them can be decided by further research alone.

The translation is by Mr. Theodore Besterman, and there is an appreciative foreword by Sir Oliver Lodge.

G. N. M. TYRRELL.

Functional Affinities of Man, Monkeys, and Apes. By S. ZUCKERMAN, D.Sc., M.R.C.S. (London: Kegan Paul, Trench, Trübner & Co. 1933. Pp. xviii + 293. Price 10s. 6d. net.)

In spite of the great amount of work that has been done on the subject, there is still a good deal of uncertainty as to the relationships and evolutionary history of the animals belonging to the great mammalian Order of the Primates, which includes the lemurs, monkeys, apes, and man. The morpho-

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logical and palaeontological evidence is insufficient to decide the questions at issue, and, particularly with regard to the evolution of man, there is still considerable divergence of opinion among the experts. Thus Professor Wood Jones holds the heterodox view that man developed from a simple generalized form like *Tarsius* quite independently of monkeys and apes.

Dr. Zuckerman, who recently published an excellent book on *The Social Life of Monkeys and Apes* (1932), has in this new volume attempted to supplement the morphological evidence as to the relationships of the Primates by collecting together what is known about their "functional" characteristics, that is to say, their physiology and behaviour. Accordingly he deals among other things with the various mechanisms of reproduction found within the group, with the reactions of their blood, the physiology of their sense-organs, and generally with their behaviour in relation to the development of their brain. The sections on behaviour are perhaps the most interesting to the general reader.

Evidence is accumulating that at least some monkeys (of the genus *Cebus*) are little if at all inferior to chimpanzees in "intelligence" as judged by their power of utilizing various objects as tools.

On the whole, the functional data brought forward by Zuckerman are consistent with the orthodox view of the relationships of these forms, as reflected in the commonly accepted scheme of classification given on p. 17.

E. S. RUSSELL.

Modern Theories of Law. VARIOUS. (London: Oxford University Press; Humphrey Milford. 1933. Pp. vii + 229. Price 8s. 6d.)

This book contains the text of ten lectures delivered at the London School of Economics in 1932. It is intended to provide an introduction to modern legal theory. There is a somewhat rambling re-examination of Austin by Professor Manning; a pleasant summary of the achievements and limitations of Sir Henry Maine by Dr. Robson; Mr. Meyendorff provides a fascinating glimpse of Leo Petrazzky, "the only one who has undertaken to re-examine the process of human motivation, and having analysed the dynamics or mechanism of the urges and repulsions which have a normative power, has begun to discover the process by which the individual and the community come to share or to differ in their legal and moral concepts, and form moral and legal averages never changing, some decaying, others in formation" (p. 28). Sir Maurice Amos provides a brief summary of the work of Dean Roscoe Pound. Professor Goodhart has little difficulty in showing the confusions into which some American realists have been led by their misunderstanding of scientific method and their misuse of physical analogies. Mr. Wortley provides a short account of the work of Francois Geny.

Interesting as these lectures may have been, it is probable that the student will turn with more eagerness to the critical examination of Renard, Stammler, Kelsen, and Duguit provided by Dr. Jennings, Professor Ginsberg, Dr. P. Lauterpacht, and Professor Laski respectively. It is probable also that he will be a little disappointed. For it is obvious that the lecturers were more interested in their subjects' criticisms of other theories than with their actual contribution to a theory of law. Dr. Jennings finds that the Institutional school of Renard and Hauriou suffers from "a confusion of method," failing to distinguish sociology and philosophy. "The real value of Renard's work consists partly in its renewed emphasis upon the disappearance of individualistic law . . . and partly in the numerous incidental but fruitful comments

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which the author almost casually throws out." It is just these "incidental but fruitful comments" which a brief survey cannot give. Professor Laski, while agreeing with Duguit's criticisms of the classic theory of sovereignty, considers that as soon "as he embarked upon the task of discovering a constructive alternative, he missed the central necessity of his theory—a criterion of justice to which the specific commands of positive law must conform" (p. 66). To Dr. Ginsberg "the task of legal philosophy would seem to be not to rest content with the idea of justice as a remote idea of reason, but to endeavour to give it concrete form by defining the proximate conditions of the harmonious realization of human purposes" (p. 49). But he does not think that Stammerer has succeeded where Kant failed in working out the implications of the idea of rationality in relation to human conduct. All students will be grateful for Dr. Lauterpacht's lucid statement of Kelsen's pure science of law, but whether they will be helped to a clear understanding of the nature of law is more doubtful. Kelsen, he tells us, "does not regard the law conceived as the sum-total of legal rules as a will. Neither does he regard it as a command or a psychological process or even a social reality. It is the product of a mental operation . . . the science of law is a branch of normative sciences as distinguished from natural sciences; . . . the legal rule is concerned with what the positive law shall be, and not with the question why positive law is obeyed or what the positive law ought to be" (p. 108). If we ask why the constitution should be obeyed, the only answer that can be given is that it should be obeyed because we have adopted as an initial hypothesis of the legal system the fundamental norm that the constitution shall be obeyed (p. 109). This fundamental norm is not grounded "in a material ethical value, for instance, that of justice" (p. 111). But once adopted, it constitutes the beginning of an autonomous system governed by its own specific—not by causal—laws (p. 111). But just what is the nature of these specific laws is not made clear. The normative rules of logic, grammar, ethics, aesthetics, are discovered by reflecting upon the nature of thought, language, morals, beauty. But upon what must we reflect to develop the normative science of law: the existing social system, or our conception of justice?

K. SMELLIE.

Social Development in Young Children: A Study in Beginnings. By SUSAN ISAACS. (London: Routledge & Sons, 1933. Pp. vii + 480. Price 15s.)

This volume is the second of a series of three, and is based on the records of children who attended Dr. Isaacs' School in Cambridge over a period of three years. In Volume I the records are examined with reference to the children's intellectual growth. In the present volume the social development of the same children is the main theme. Dr. Isaacs is careful to point out, and rightly too, that the two aspects cannot be treated in complete isolation, and that in the present study the background discussed in the first volume must ever be remembered.

The main theme of the treatise is that although "social instincts" do not appear until a later age in the child's development, these do not emerge suddenly, but have a pre-history, and it is this pre-history which Dr. Isaacs seeks to trace and unravel.

The book is divided into two parts. Part I contains the records of the children and their interpretation. Part II deals with educational problems.

Part I is subdivided into three chapters. Chapter I is a short introductory chapter, but of importance in that it contains the writer's attitude to the

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experiment, and her reasons for studying the whole child and his reaction to whole situations. Chapter II contains the actual records of the sayings and actions of the children concerned in so far as these show "social" behaviour. The records are arranged under two main heads: (1) love and hate in action; (2) the deeper sources of love and hate. Under the first head are included instances showing the child's primary ego-centric attitude, his hostility and aggression, and finally his friendliness and co-operation. Under the second head are examples of the various forms of sexuality, and illustrations of guilt and shame.

On first reading, these records seem rather wearisome, for they occupy 174 pages. But on a second reading their real significance emerges. They show clearly the thoughts and actions of a group of normal children and form a background to which isolated instances of behaviour can be referred. Thus a parent worried over the peculiar behaviour of his young child finds on glancing through the detailed records of his group that his own child is no exception to the rule, and that his shocking behaviour is merely an ordinary manifestation of normal children of his age. This, I think, is one of the most valuable parts of the book. On these records, too, Dr. Isaacs bases her interpretation of the theory of development which is contained in Chapter III, again a lengthy chapter of 195 pages, and one of great practical importance, arranged according to the same logical scheme as the previous chapter. The interpretation throughout is psycho-analytical in character, and some of the findings may not be acceptable to all. But the writer is to be congratulated on having written an outstandingly lucid and interesting account of child behaviour. All the aspects of the data collected are treated against the background of modern psycho-analytic theory, but all through the reader is impressed by the open-mindedness and unprejudiced attitude of the writer. She does not force her facts to fit the theory, nor strain them too far. Where the data are fragmentary, she has no hesitation in admitting this, and throughout the book her own observations are supported by observations from other writers. A very valuable portion of the chapter is devoted to projection, another to aggression, and another to play, to single out only three of the many topics discussed. All of these throw new light on children's attitudes, and ought to be known by all who come into close contact with children. The section devoted to the discussion of sexuality is treated with restraint, and should be of interest not only to psychologists, but to all educators and parents.

Part III of the book attempts to show the relationship between psycho-analysis and education in the light of the findings already set forth in the preceding chapter. The author rightly deprecates the use of an amateur psycho-analysis by the educator, and points out the harmful effects which inevitably follow. She condemns, too, the policy of absolute freedom for the child. "The idea that if we leave the child entirely free to do what he likes we are thereby 'avoiding repression' is a mistaken one" (p. 424). This should give the advocates of complete freedom for the child food for thought. There is also an interesting section on play and its effect in easing strain and tension.

The whole book well repays careful study. It is not written in popular language, for it is not intended to be a popular presentation. It is addressed to the scientific public as well as to students of psychology and education. It cannot be read hurriedly, nor does a cursory glance do it justice. It requires to be read slowly and carefully, and then it reveals a wealth of information about child-life and behaviour which will be of inestimable value to all concerned.

MARY COLLINS.

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The Psychology of Laughter: A Study in Social Adaptation. By RALPH PIDDINGTON, M.A. (London: Figurehead Press. 1933. Pp. 227. Price 10s. 6d.)

This book is badly proportioned, no less than 130 of its admirably printed, but rather slight, pages being devoted to the statement and criticism of the views of far too many people, not all important. In consequence, the writer treats his own views too cursorily, and in spite of his evident erudition and ability his book appears superficial. We would have been content to sacrifice the greater part of the critical sections if we could have had a fuller examination of his thesis that laughter at the ludicrous protects society by making an anti-social event harmless. For "the ludicrous is always anti-social, a sudden blow to social sentiments centred about objects and traditions of minor importance." Laughter shows that we can ignore the fact for practical purposes. This view might be developed with a wider range of instances, as, for example, to show that the conservative need not reorganize his social reactions so long as he can find pleasure in the contrast between a proposed novelty and his familiar world, while the mere fact of laughing will render him less able to think of reasons for reconsidering his convictions.

A. W. WOLTERS.

Books received also:—

- L. TOLSTOY (Tr. A. Maude; Introduction by The Hon. Mrs. A. Lyttelton). *A Confession and Gospel in Brief*. Vol. 11 of the Works of Leo Tolstoy Pp. xxiv + 539.
- L. TOLSTOY (Tr. A. Maude; Introduction by Lady Sybil Smith). *On Life; and Essays on Religion*. Vol. 12 of the Works of Leo Tolstoy. Pp. xxix + 412. London: Oxford University Press; Humphrey Milford. 1934. £9 9s. for 21 volumes. Not sold separately.
- S. V. KEELING, M.A., D. ès L. *Descartes*. London: Ernest Benn Ltd. 1934. Pp. xi + 282. 12s. 6d.
- H. D. OAKELEY, M.A., D.Lit. *History and the Self*. London: Williams & Norgate Ltd. 1934. Pp. 286. 10s. 6d.
- C. D. BROAD, Litt.D. *Determinism, Indeterminism, and Libertarianism*. Cambridge at the University Press. 1934. Pp. 48. 2s. 6d.
- J. L. STOCKS. *On the Nature and Grounds of Religious Belief*. (Ridden Memorial Lectures, sixth series.) London: Oxford University Press. Humphrey Milford. 1934. Pp. 47. 2s. 6d.
- J. E. TURNER, M.A., Ph.D. *Essentials in the Development of Religion: A Philosophic and Psychological Study*. London: George Allen & Unwin Ltd. 1934. Pp. 308. 12s. 6d.
- L. SEIF. *Individual Psychology and Life Philosophy*. London: The C. W. Daniel Co. 1934. Pp. 59. 2s. 6d.
- W. R. WILLIAMS, F.R.C.S. *Science and its History*. Printed for the author by E. J. Burrow & Co., Cheltenham and London. 1933. Pp. 19.
- J. S. HUXLEY, M.A., and G. R. DE BEER, M.A., D.Sc. *The Elements of Experimental Embryology*. London: Cambridge University Press. 1934. Pp. xiii + 514. 25s.
- W. PATER. *Marius the Epicurean*. (Introduction by O. Burdett.) London: J. M. Dent & Sons. 1934. Pp. xviii + 267. 2s.
- K. B. PAKER, Ph.D. *The Concept of a Limited God. A Study in the Philosophy of Personalism*. Washington, D.C.: Shenandoah Publishing House, Inc. 1934. Pp. 234. \$3.

NEW BOOKS

- Collected Papers of Charles Sanders Peirce*. Vol. IV, *The Simplest Mathematics*. (Ed. C. Hartshorne and P. Weiss.) Cambridge, U.S.A.: Harvard University Press; London: Oxford University Press; Humphrey Milford. 1933. Pp. ix + 601. \$6; 25s.
- C. PLEYDELL-BOUVERIE. *The Cosmic Awakening*. London: Williams & Norgate Ltd. 1934. Pp. 183. 7s. 6d.
- F. S. RODKEY, Ph.D. *An Historical Approach to the World Problems of To-day*. Urbana, U.S.A. Printed by Urbana Courier Co. 1934. Pp. 24. 25 cents.
- G. P. GOOCH, D.Litt., F.B.A. *The Unity of Civilization*. London: The Ethical Union. 1934. Pp. 19. 2½d.
- A. K. ROGERS. *Ethics and Moral Tolerance*. London: Macmillan & Co. 1934. Pp. 323. 10s.
- H. McLACHLAN, M.A., D.D., F.R.Hist.S. *The Unitarian Movement in the Religious Life of England. (1) Its Contribution to Thought and Learning, 1700-1900*. London: George Allen & Unwin Ltd. 1934. Pp. 317. 10s. 6d.
- VARIOUS. *Creativity, Politics, and the a priori*. (Symposia of Joint Session of Aristotelian Society and Mind Association, 1933.) London: Harrison & Sons Ltd. 1933. Pp. 219. 15s.
- L. S. STEBBING, D.Lit. *Logic in Practice*. London: Methuen & Co. 1934. Pp. ix + 113. 2s. 6d.
- J. H. LEUBA. *God or Man? A Study of the Value of God to Man*. London: Kegan Paul, Trench, Trübner & Co. 1934. Pp. xii + 338. 10s. 6d.
- MRS. RHYS DAVIDS, D.Litt., M.A. *Indian Religion and Survival. A Study*. London: George Allen & Unwin Ltd. 1934. Pp. 96. 3s. 6d.
- W. M. KRANEFELDT. (Introduction by C. G. Jung; Tr. by R. M. Eaton.) *Secret Ways of the Mind. A Survey of the Psychological Principle of Freud, Adler, and Jung*. London: Kegan Paul, Trench, Trübner & Co. 1934. Pp. xl + 188. 6s.
- Annual Report of the Smithsonian Institution, 1932*. Washington: U.S. Government Printing Office. 1933. Pp. xiii + 497. 70 cents.
- L. S. STEBBING. *A Modern Introduction to Logic*. [Revised edition.] London: Methuen & Co. 1933. Pp. xx + 525. 15s.
- R. BAYER, D. ès L. *Léonard de Vinci, La Grâce*. Paris: Librairie Félix Alcan. 1933. Pp. 393. 30 frs.
- R. BAYER, D. ès L. *L'esthétique de La Grâce*. Paris: Librairie Félix Alcan. Tome 1: Pp. viii + 635. Tome 2: Pp. 581. 2 tomes ensemble 100 frs.
- I. DE LA VAISSIÈRE. *Méthodologie scientifique. (Archives de Philosophie, Vol. X, cahier 111.)* Paris: G. Beauchesne et Fils. 1933. Pp. 100. 24 frs.
- E. AUGIER. *Mécanismes et Conscience*. Paris: Librairie Félix Alcan. 1934. Pp. 355. 30 frs.
- J. IWANICKI, Dr. theol. *Leibniz et les démonstrations mathématiques de l'existence de Dieu*. Paris: J. Vrin. 1933. Pp. 316.
- E. DUPRÉEL. *La Cause et l'Intervalle, ou Ordre et Probabilité*. Bruxelles: M. Lamertin. 1933. Pp. 51. 8 frs.
- M. BLONDEL. *La Pensée. (I) La Genèse de la Pensée et les Pains de son Ascension Spontanée*. Paris: Librairie Félix Alcan. 1934. Pp. xli + 421. 60 frs.
- M. NÉDONCELLE. *La Philosophie religieuse en Grande-Bretagne de 1850 à nos jours*. (Préface par A. Rivaud; Supplément: P. Archambault, J. Soulaïrol, M. Prélot.) Paris: Bloud & Gay. 1934. Pp. 233. 20 frs.
- E. WIND. *Das Experiment und die Metaphysik. Zur Auflösung der kosmologischen Antinomien*. Tübingen. Verlag von J. C. B. Mohr (P. Siebeck). 1934. Pp. xii + 120. Im Einzelverkauf M. 7,-, in Ganzleinen geb. M. 8,80.

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- Verhandlungen des dritten Hegelkongresses vom 19. bis. 23 April, 1933 in Rom, Im auftrag des Internationalen Hegelbundes herausgegeben von B. Wigersma.* Tübingen: J. C. B. Mohr (Paul Siebeck); Haarlem: N/V.H.D. Tjeenk Willink, 1934. Pp. 278. Mk. 14.50.
- F. S. VARANO. *Vincenzo de Grazia*. Napoli: Libreria Editrice Francesco Perrella S.A. 1931. Pp. 109. Lire dieci.
- F. S. VARANO. *L'Ipotesi nella Filosofia di Ernesto Naville*. Gubbio: Scuola Tipografica "Oderisi," 1931. Pp. 52. Lire cinque.
- F. S. VARANO. *Il Problema della Storia in Xénopol*. Gubbio: Scuola Tipografica "Oderisi," 1931. Pp. 55. Lire cinque.
- A. MASNOVO. *Da Guglielmo d'Auvergne a San Tomaso d'Aquino*. Vol. 2. *L'Origine delle cose da Dio in Guglielmo d'Auvergne*. Milano: Società Editrice "Vita e Pensiero," 1934. Pp. vii + 203. Lire quindici.
- G. GENTILE. *Preliminari allo Studio del Fanciullo*. Appunti: Quarta edizione riveduta. Firenze.: G. C. Sansoni, 1934. Pp. vi + 96. L.6.
- G. GENTILE. *La Filosofia del-l'Arte in compendio*. Ad uso delle Scuole. Firenze: G. C. Sansoni. Pp. 182. L.7.
- G. GENTILE. *Discorsi di Religione*. Terza edizione riveduta. Firenze: G. C. Sansoni. Pp. viii + 105. L.6.
- A. CARLINI. *La Religiosità dell'Arte e della Filosofia*. Firenze: G. C. Sansoni. 1934. Pp. x + 227. L.24.
- F. MELI. *Spinoza; e due Antecedenti Italiani dello Spinozismo*. (Prefazione di G. Saitta.) Firenze G. C. Sansoni. 1934. Pp. viii + 197. L.18.

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INSTITUTE NOTES

DR. BROAD'S address to the Institute on February 13th, entitled "Determinism, Indeterminism, and Libertarianism," is now published by the Cambridge University Press. Price 2s. 6d.

SUMMER TERM begins on April 24th and ends on June 26th. The following course of lectures has been arranged for the Summer Term of the Session 1933-34:—

"REAL VALUES," a course of six weekly lectures by Professor J. H. Muirhead, LL.D. (Fellow of the British Academy), on Wednesdays at 5.45 p.m., at University Hall, 14 Gordon Square, W.C.1, beginning May 2nd. Fee for the course, 12s. 6d. Members free.

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THE JOURNAL OF THE BRITISH INSTITUTE OF PHILOSOPHY

VOL. IX No. 35.

JULY 1934

EDITORIAL

'MAN is born free, and everywhere he is in chains,' said Rousseau. This, however, puts the cart before the horse. It is truer to say that man was born in chains, and everywhere he is struggling to be free. Notwithstanding, however, his long history, man has not yet got rid of his chains. Indeed, it would seem that nations sometimes, after having enjoyed for a period a large measure of freedom, return to their fetters when confronted with a crisis. Faith in a generous toleration and in the light of Reason is temporarily lost, and primitive forces once more rise to the surface and dominate the lives of men. Thus the tortures of Prometheus are renewed. But Reason, though exiled, cannot be slain. So long as there is life at a high conscious level, Reason cannot indefinitely be denied her proper function of guide and friend to the human soul, for without the wisdom which is her gift man cannot survive as a civilized being.

Freedom for adventure in the realms of thought and practice would seem to be a necessity for human life. There can be no lasting satisfaction with any static order of affairs, however momentarily excellent. Life's insistent demand is for scope to advance to novel forms of achievement and expression. Its denial engenders restlessness in the soul and a deep discontent. Moreover, since living consciousness is essentially creative, it cannot be imprisoned in any permanent and unchanging form without ultimately sickening of the malaise *tedium*, and entering upon the path of decay.

At the present time the creative soul of the world whose essence is freedom is sorely maimed. And this impairment of health is not

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wholly due to the antagonisms of man with man. These, indeed, play a sinister rôle enough in hindering the growth of freedom. But the massive habits of physical nature also contribute their quota in the frustration of human purposes. Heat and cold, birth and death, disease and famine, earthquake and storm, constitute the background to the human drama which is being played throughout the ages. Further, the growth of applied physical science in our day has brought added dangers, making us acutely aware that the more complicated civilization becomes, the more it is open to attack.

The essence of human freedom is the power to accomplish practical purposes, to achieve ends which satisfy deep-rooted human needs. But it is just this freedom of action which is so difficult to attain. Economic forces have played no insignificant part in this frustration. Hence to-day the primary demand made in the name of freedom is for economic security and a reasonable degree of social order. But since man cannot live by bread alone, freedom also demands an environment in which certain ideal ends bearing intrinsic values can be pursued. It is this blending of ideals and economic policies which constitutes the web of human history. One of the most pressing questions of to-day is whether economic freedom for the masses can be purchased without a large sacrifice of political liberty. Herein lies the significance of those experiments which are to-day being made in certain countries.

Since in every modern state there are many types of individuals and groups, each having its own character and its own worth, freedom for all is impossible without mutual toleration. But intolerance is the besetting sin of every society. Times without number it has defeated the pursuit of freedom and brought disaster and ruin. In the modern state there cannot be freedom without a generous toleration of diversity. What is to be aimed at is not the destruction of different groups with their specific character in the interests of a false ideal of homogeneity, but room for each to make its contribution to the common life in its own way.

social freedom is the ideal of all great statesmen. Fortunately in the wide field of human activity represented by professional institutions it has been largely attained. The modern State has come to realize that it is not within its competence to decide upon matters which fall within the province of learning, art, and even religion, but only to provide opportunities for learning and

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ability to flourish. Thereby it expresses its belief that sound knowledge can be trusted to banish error, a belief that has been increasingly justified. In many regions of human thought Reason has thus won a strong foothold, bringing as its gift a wider freedom to man.

But beyond the ideal of social freedom, Plato teaches us there is a deeper freedom which the individual soul needs for its peace. This freedom lies beyond all temporal circumstances good or bad, being based on an intuition of the eternal order of things, and upon the conviction that human life is grounded in a realm of values changeless in the midst of change. This deeper freedom, according to Whitehead, can be enjoyed by all who, through understanding, come to learn that as individuals they are partners in the supreme adventure of the universe as a whole, an adventure which is concerned with the realization of all possible values. The possession of such an intuition is, in his words, "the reconciliation of freedom and the compulsion of the truth."

Finally, it may be asked if the notion of freedom is justified by the constitution of Nature. In every human society there has been some liberty and some compulsion, and the values of human life have been won in an environment constituted by a synthesis of both in some compatible proportion. Is freedom as well as compulsion an operative factor in Nature as a whole? If this be the true view, then Nature is not merely the product of an inevitable causal process, but is also that which issues from the exercise of spontaneity; and if self-creativity be an ultimate metaphysical principle, we have here the ground for the conviction that the idea of freedom is not merely an idle play of the emotions, but is a belief justified by the ultimate constitution of reality.

THE PRESENT NEED OF A PHILOSOPHY

MY DEAR EDITOR,

Your invitation to continue the correspondence opened by Sir Herbert Samuel in the last issue of the JOURNAL is one which I cannot in honour refuse; and I am the less reluctant to accept it, because the President's letter has expressed so many of my own convictions that I can follow his lead where I should have hesitated to venture alone. That philosophy ought in some way to help our generation in its moral, social, and political troubles; that epistemology and the theory of value are not directly contributing to that end; and that in this respect some special significance attaches to the idea of evolution—all this I fully and gladly accept; and I will try to say, as briefly as I can, what it is that in my opinion philosophy can do.

But first, there is something which it cannot, and must not be tempted to do. It cannot descend like a *deus ex machina* upon the stage of practical life and, out of its superior insight into the nature of things, dictate the correct solution for this or that problem in morals, economic organization, or international politics. There is nothing in a philosopher's special work qualifying him to pilot a perplexed generation through those rocks and shoals. If a mariner finds himself at sea without navigator, chart, or compass, the Astronomer Royal himself, discovered among the passengers, could do little for him; he would be wiser to hail some coastwise fisherman. Even Plato did not think otherwise. He never proposed that professional philosophers should be dragged, blinking, from their studies and forcibly seated on thrones; only that expert knowledge of political life and its practical difficulties should be illuminated by philosophical reflection on its ultimate end.

If nowadays we should hesitate to go even as far as Plato, it is not because our opinion of philosophy is lower, but because our opinion of the plain man is higher. Christian theology holds that the faith of a simple peasant, without any tincture of theological learning, is sufficient for salvation; modern philosophy, of whatever school, follows its example in holding that non-philosophical thought in all its forms—moral and political, scientific, religious, or artistic—is able to do its work without asking philosophy's help and to justify itself without awaiting philosophy's verdict.

In this opinion there lurks an opposite danger. It may seem that philosophy's only task is to analyse knowledge we already

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possess, and theorize about activities we are already able to perform; that it is no more able to influence the processes which it describes than astronomy can influence the movements of the stars; that the only motive to pursue it is a pure disinterested curiosity, the only good to be gained from it, pure theoretical knowledge; and that Plato, Spinoza, and all others who have thought this knowledge somehow serviceable to our well-being were victims of a gigantic and inexplicable illusion.

The truth seems to me to lie somewhere between these two extremes. If the philosopher is no pilot, neither is he a mere spectator, watching the ship from his study window. He is one of the crew; but what, as such, is his function? In order to find an answer to this question, I suggest that we should look back three hundred years or more, to the infancy of modern science. At the beginning of the seventeenth century no one could foresee the triumphs which science was one day to achieve. It was not, therefore, a foreknowledge of these triumphs that encouraged innumerable men to persevere in almost incredibly detailed inquiries concerning the laws of nature, in a corporate effort shared by all parts of the civilized world and extending over many generations. The will to pursue those inquiries was not based on any conception of their future outcome, but it was based on something: it was based on the belief that nature is a single system of things, controlled throughout its extent by a single system of laws. In adopting this idea, civilized man was setting aside his immemorial belief in demonic agencies, magical influences, and the inscrutable caprices of individual things, and accepting a new view of the world, not received on faith, and not arrived at by scientific induction, but thought out and stated in a systematic form by the philosophers of the sixteenth century.

The notion of a uniformly law-abiding natural world is so familiar to ourselves that we are apt to forget how recent a thing it is in the history of thought, how hardly it was won by Renaissance thinkers—for example, with what difficulty sixteenth-century thought gave up Aristotle's doctrine that the law of gravitation holds good only in the sublunary sphere—and how dramatic was its verification by one scientific discovery after another. This philosophical conception of nature has played the part, in relation to scientific research, of a constant stimulus to effort, a reasoned refutation of defeatism, a promise that all scientific problems are in principle soluble.

There is a certain analogy between the state of things at the beginning of the seventeenth century, when the special problems of civilized life were concerned with man's control over nature, and the state of things in the modern world, whose special problems are concerned with human relations. Sir Herbert Samuel justly enumerates them: "personal and social morality, economic organiza-

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tion, international relationship." These problems, like the problems of natural science, can be solved only by detailed and patient investigation, exhaustive inquiry, skilful experiment. But this arduous and slow labour, if it is to be undertaken at all, must rest on two things: a conviction that the problems can be solved, and a determination that they shall be solved. Of these two, the first is, I think, capable of being provided, in a reasoned form, by philosophy. Apart from such a reasoned conviction, the will to solve them is so handicapped by doubts within and opposition without, that its chance of success dwindles to vanishing-point. There is always a vast mass of opinion (and very respectable opinion) in favour of allowing established institutions to stand firm for fear of worse to follow; there is always a dead weight of inclination, however bad things may be, to enjoy what good we can snatch for the short time allowed us; but, more dangerous than either of these, there is the defeatist spirit which fears that what we are aiming at is no more than a Utopian dream. And this fear becomes paralysing when, not content with the status of a natural timidity or temporary loss of nerve, it calls in the help of philosophical ideas, and argues that the evils admittedly belonging to our moral, social, and political life are essential elements in all human life, or in all civilization, so that the special problems of the modern world are inherently insoluble. The philosophical ideas underlying this argument are connected with certain aspects of the idea of progress; especially the false conception of progress as due to a cosmic force which can be trusted to advance human life automatically, without the active co-operation of human beings, and (the natural reaction from this) an equally false denial that progress is possible at all.

As the seventeenth century needed a reasoned conviction that nature is intelligible and the problems of science in principle soluble, so the twentieth needs a reasoned conviction that human progress is possible and that the problems of moral and political life are in principle soluble. In both cases the need is one which only philosophy can supply. What is needed to-day is a philosophical reconsideration of the whole idea of progress or development, and especially its two main forms, "evolution" in the world of nature and "history" in the world of human affairs. What would correspond to the Renaissance conception of nature as a single intelligible system would be a philosophy showing that the human will is of a piece with nature in being genuinely creative, a *vera causa*, though singular in being consciously creative; that social and political institutions are creations of the human will, conserved by the same power which created them and essentially plastic to its hand; and that therefore whatever evils they contain are in principle remediable. In short, the help which philosophy might give to our "dissatisfied, anxious, appre-

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hensive generation" would lie in a reasoned statement of the principle that there can be no evils in any human institution which human will cannot cure.

This cannot be done in a day. But it has already been well begun. I will mention three writers whose work, taken as a whole, seems to me unmistakably converging upon a conception of man and his place in the universe which would justify that principle. There is Mr. Alexander's *Space, Time, and Deity*; there is General Smuts's *Holism and Evolution*; and there is Mr. Whitehead's series of books grouped round *Process and Reality*. These, with others hardly less important, seem to me the firstfruits of a new philosophical movement in which epistemological discussions and the old controversy between realism and idealism have fallen, as Sir Herbert desires that they should fall, into the background; in which the central place is taken, as Sir Herbert wishes it should be, by the idea of development; in which philosophy feels itself a collaborator with science, neither its enemy nor its slave, but having its own dignity and its own methods, while it respects those of science; and in which man is conceived neither as lifted clean out of nature nor yet as the plaything of natural forces, but as sharing, and sharing to an eminent degree, in the creative power which constitutes the inward essence of all things.

Yours faithfully,

R. G. COLLINGWOOD.

OXFORD.

April 24, 1934.

MY DEAR EDITOR,

A man is naturally disinclined to consider a theory important, unless it presents itself to him as a solution of a problem which troubles or once troubled him. I believe it is with some such notion in mind that Sir Herbert Samuel, in a letter to the Editor of this Journal,¹ suggests that contemporary philosophers leave epistemology "in the background." What troubles the average intelligent man most in the year nineteen hundred and thirty-four is not the problem of how he can perceive Sirius which is eight light-years from our planet, or of how he recognizes a friend's face, or of the basis of his inductive beliefs about existing things. He is far more concerned about, say, the problem of economic and political relations between men and nations. These, to him, lie near the heart of humanity, and in the aggravated form which they have now assumed are likely to touch off something which might irretrievably shatter the dignity—even the existence—of the human race. To him, that theory will appear important which throws light on such a problem. Any other kind will be "divorced from life."

¹ Vol. IX, No. 34 (April 1934), pp. 134-135.

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I think the professional philosopher must admit the timeliness of Sir Herbert's invitation, and the truth of his main conviction. But he cannot help being somewhat bewildered by it, nevertheless. It gives rise in his mind to perplexing questions. If that philosophy is important which is in revolt against abstractions and against realities which transcend human experience, what about pragmatism? Why not refer the serious student of the present international situation to the writings of James or Dewey or Schiller? If philosophical humanism is needed, then certainly the emaciated intellect in search of *vital* pabulum should sit down to pragmatic meat. Now if pragmatism leaves the thoughtful economist or statesman cold—and it usually does—then perhaps we can turn to the philosophy which so describes human relations as to impress one with a warm sense of the integral unity of all men, their spiritual kinship in a universal order. Such an impression might yield the intuition that the good of a man or a nation lies in the good of other men or other nations, and would not such a theory throw light on the world-problem of to-day, in the sense of resulting in enlightened international agreements and attitudes? But if so, what about contemporary objective idealism? What about its theories of the state and its doctrine that the essence of any individual is not self-contained but implicated with the being of all others? This is a magnificent and stirring view of human nature and of the order of existence. Now if this is not what our average intelligent man wants—and he usually does not, granting he is a man of affairs, political or economic—then the professional philosopher begins to suspect that what this man considers important is economic or political treatises about specific subjects, such as, say, the gold standard or the present Anglo-Japanese relations. Of course, not any treatment of these subjects would satisfy his need. I believe that Sir Herbert's plea is, unwittingly, for such treatises where these are *enlightened by world-perspectives* or are engendered against a philosophic background. But is there not much in contemporary philosophy which, if patiently assimilated, will give a man a philosophic background? One could hardly expect philosophy itself to consist in enlightened economic or political treatises dealing with current problems. The production of such treatises is—if I may play with words—the business of the business man, taking "business" in its best and broadest sense.

Now if numerous and varied philosophic theories of human relations are being and have been formulated, such that the world-spirited and philosophically hungry individual has much to choose from, why not permit, even encourage, the philosopher to theorize about *any* class of problematic relations—as, for example, the epistemological? The difficulty is not that we have an insufficiency of philosophies about men and nations, but that too few men of

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affairs care about becoming philosophical. Unfortunately, this is true of the average intelligent student of political and economic crises. But the student of world-affairs who does have a genuine hunger for that detachment and that integral understanding of human relations which the philosopher deals with, can well satisfy it by the assimilation of books written since the beginning of this century. (Just why our student generally demands *recent* books of this kind is not clear to me. Of course new attempts are always valuable, inasmuch as something better than ever may be achieved. But, philosophically considered, they will not be better merely for dealing with specific current problems. If they possess greater merit on a philosophical plane, it will be because they express more adequate solutions for the same problems that troubled Plato or Descartes or Kant.) And let no such serious student turn away from philosophy because the first book he picks up, or the first philosophical lecture he attends, is on epistemology. The theory of knowledge is by no means the whole of philosophy, not even of present-day philosophy, though it is an important part.

In conclusion, I shall attempt to justify that phrase "important part" by making what might be called a counter-suggestion. Though Professor Montague is correct in his contention that "philosophy's primary interest is in the ways of things rather than in the ways of knowing them"¹—and Sir Herbert is evidently of the same opinion—yet there is a sense in which the typical modern temper urgently needs epistemology. Who has not sensed that widely prevalent apathy among our contemporaries with regard to anything theoretical? And what is one major reason for the consequent intellectual dilletantism? It is, it seems to me, the underlying "feeling" that either (1) human knowledge is through and through a pretty shoddy and futile gesture, or (2) if it is not, at least no one seems capable of giving a straightforward description of it which does not violate common sense, so the less said about it the better. Now, confronted with this situation, I am strongly inclined to believe that the greatest philosophical geniuses of our time should be enlisted in the field, not of the theory of social relations, but of the theory of knowledge. To clear the atmosphere at that point by a simple yet scientific account—such does not yet exist—of how men lay hold of reality in cognition and, by truly knowing it, find themselves in an intimate and ever-growing control over it—to do this would be doing yeoman service to the average intelligent man. Eventually, it might give him more zest even for dealing with international problems. It seems plausible that even pensive statesmen, or, let us say, delegates of the League of Nations, would think and live with an abandon which to them would be impossible had they not

¹ *The Ways of Knowing*, p. 413.

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first arrived at something they could take to be the solution of the epistemological problem.

And if the patient for whom we are prescribing epistemology makes a wry face and says, in the words of Callicles, "Well then, proceed with those little cramped questions of yours," we shall remember the reply that Plato put into Socrates' mouth and say with Socratic irony, "You are fortunate, Callicles, in having been initiated into the Great Mysteries before the Little: I did not think that was the proper thing."

VIRGIL C. ALDRICH,

THE RICE INSTITUTE,
HOUSTON, TEXAS.

May 24, 1934.

MY DEAR EDITOR,

By putting bluntly the vital question of whether philosophy, like the natural sciences, has a message for the comfort and encouragement of millions, or whether its sole legitimate function is to quench the speculative thirst of the few, I feel that our President has done a signal service to philosophers and laymen alike. Although I shall venture to disagree with much of the answer he proposes, I am none the less grateful to him for raising so fundamental an issue.

There would, I think, be little disagreement about the plain historical fact that the great philosophers seem, as a rule, to have regarded themselves as specially entrusted with the piloting of their fellow-men towards the haven of spiritual achievement. One remembers—calling to mind only a handful of the intrepid band—how Socrates followed his conscience against inexorable Athenian law, how Plato abandoned contemplative ease for a despot's court, how Aristotle became a schoolmaster to save an empire, how Rousseau prophesied the dawning of democracy while Condorcet sketched the lineaments of its educational system, how Fichte fired the patriotism of the German nation before Hitler and without reviling the foreigner or the Jew. How often, indeed, have philosophers sallied forth from their ivory tower into the dust and conflict of national or international turmoil; and even after withdrawal to its tranquil chambers, have they not beckoned others to share with them the wider sweep its balconies command, the purer delights and the more abiding peace that visit all those its walls embrace?

This sense of mission may, of course, have been an empty illusion bred of megalomania, but its generality among philosophers of the highest standing is at any rate a presumption in favour of authenticity. There is, however, one feature of philosophy common to both

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Oriental and Occidental thinkers, that occurs as regularly among ancient cultures as in post-Renaissance Europe; and it is this, I believe, that constitutes the most essential bearing of philosophical thought on the day-to-day problems that confront and perplex the ordinary man.

For the attitude of mind cherished by the sage, and exemplified as much in his manner of existence as in the substance of his speculative conclusions, has been always and everywhere the same; his heart is filled with an unshakable conviction that the only life really worth being lived is a life resplendent with scientific truth, with religious vision, with moral and artistic beauty, and that, however crushing the weight of ignorance and however powerful the sway of selfish or destructive instincts, reason and love must ultimately prevail wherever humans dwell. Prometheus, according to the legend, snatched fire from heaven in order to bring warmth and comfort to the chilled bodies of men; philosophy is a second Prometheus, but the torch it bears was kindled in the flame of the ideal, and the invigorating warmth it engenders thaws the numbness of the questing spirit. I cannot for my part agree with Sir Herbert that philosophers are sufficiently unanimous on epistemological, ethical, or metaphysical issues to be able to present the public with a body of doctrine as unassailable as the discoveries of exact science, or that philosophy should be content to relate itself "directly and deliberately to the needs of life"; the former step would invite pronouncements on many delicate questions that are still *sub judice*, while the latter would degrade a purely theoretical investigation to the level of a mere technique. It is the temper of philosophy, rather than its actual findings, that should count in the world at large; in an age when men desire as never before to heap up riches, to gratify the passing whim, to subjugate their weaker brethren, to satisfy their dreams of personal ambition, and to hear the applause of the multitude in their ears, the supreme indifference of the sage to such pursuits and his single-minded devotion to the highest cultural values are the most precious gift he can bestow.

Yours faithfully,

LISTOWEL

LONDON,
May 1, 1934.

TRUTH AND MODERN DICTATORSHIP

I. DONSKY, Ph.D.

THE Epistemology of dictatorship! This expression couples terms which seem to be utter strangers to each other. How could a political régime which is an eminently practical, often violent, hard-striking thing be concerned with a science which is an essentially unpractical, introspective business of secluded and subtle contemplation?

It could, however, be shown that it is natural for political régimes to be interested in the theoretical views of the populations they control, and even in the express or implicit epistemological views of the said populations.

Any political régime is interested in the loyalty, respect, and even love of the people for the government, for the form of government (the constitution), for the country, for the nation. Any political régime desires the citizens to be patriots and loyalists, monarchist, republican, fascist, or bolshevik, as the case may be. Now loyalty, respect, love imply formulated or vaguely felt judgments of value. And the judgments of value presuppose theoretical judgments, distinct or implicit. Supposing I hold the real quality α to be a value and the real quality β to be a disvalue. Then if anyone wants to obtain my positive valuation for an object O, he is interested in evoking my theoretical belief that O possesses the quality α and does not possess the quality β . If a political régime is interested in judgments of value, it is also interested in theoretical judgments which could serve as a foundation for the judgments of value.

The interest of the State in the views of the subjects assumes various forms. There are two fundamental and extreme types of State attitude in this matter; most States, however, occupy intermediary positions between them.

Tolerant, free, democratic States try to obtain loyalty and patriotism only by peaceful, non-coercive means. They use coercion only in exceptional cases of extreme danger. And their peaceful persuasion is of an unobtrusive, uninsisting character. It is also noteworthy that their attempts at influencing and determining the popular mind are usually restricted to special and somewhat reserved subjects. Large fields of thought are left free from any State interference. In dictatorial, intolerant States, loyalty is imposed coercively, although persuasion of a most obtrusive character is very largely used. Here State interference usually tends to embrace very wide fields of thought and even to control the popular mind in its totality.

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It may be remarked that coercive opinion-control under intolerant régimes may assume both positive and negative forms. Positive control imposes the views the State holds to be desirable. Negative control prevents the diffusion of undesirable views. Positive control imposes some thought, negative control tries to obtain abstention from some thought. Sometimes the undesirable views constitute genuine knowledge. In these cases negative control means an attempt to promote ignorance.

Another remark. The interest of the State in the views of the citizens must be distinguished from its interest in education. The second is an interest in the acquisition of true or useful ideas. The first is an interest in the absorption of ideas, the assent to which serves the cause of the rulers. But there are possibilities of coincidence. The State may diffuse ideas which serve both aims. It is worth noting that the purely political, intrinsically non-educational thought-diffusion by government most often takes the form of education.

Later on we shall return to the State attitudes just sketched. Meanwhile the following question arises. The State seems to be interested in the contents of the popular views. But how is one to prove a State interest in popular epistemology which is not concerned with the contents of any thought, but deals with the formal problems of the truth or falsehood of thought? The State wants me to hold the thought that A is true. But is it interested in my holding particular views as to the nature of truth? And is there any popular epistemology? Are large popular masses concerned about the problem of truth?

Now the attitude of the spirit towards thoughts held to be absolutely certain differs from the attitude towards thoughts held to be doubtful. Generally our attitude towards our thoughts is influenced by the assumed truth-value attributed to them. These attitudes constitute an epistemology which must be rough and loose in untrained minds. This epistemology is inherent in the lowliest steps of the human mind and deserves to be called the popular epistemology. And this often hardly conscious epistemology may find expression in differences of behaviour which are at times of great importance to the State. Recognition of absolute truth may engender a kind of behaviour different from that bred by the denial of absolute truth. Here lies the practical relevance and the political importance of mass epistemology.

It is, therefore, quite intelligible that political régimes should try or tend to foster or to favour definite epistemological attitudes; that there should be a correspondence between the atmosphere of a political régime and the patent or latent epistemology it is inclined to encourage on the territory under its sway.

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Let us try to outline the epistemology favoured by free democracy. Then we shall endeavour to delineate the epistemology of its opponent: dictatorship.

Free democracy is a régime where all kinds of thoughts are allowed to circulate freely. This is what a liberal régime really means. Now it is often suggested that the granting of the liberty both to say and write that A is B, and to say and write that A is not B implies the denial of absolute, objectively valid truth. If contradictory statements are equally admitted, so one may argue, it means that both are equally true and that truth is only relative. Does liberal democracy really imply relativist epistemology which teaches the relativity of truth?

It is very difficult to find out what relative truth really is. One may claim that any truth must be absolute truth because to be true means to be absolutely true. One may even claim that the affirmation that both "A is B" and "A is not B" are true does not depart from the principle of absolute truth because it pretends, for better or worse, undismayed by logical contradiction, that both these statements are absolutely true. The declaration that truth is true only under some special presuppositions and false under others does not imply relativity of truth: it seems only to affirm that truth is absolutely true, given this or that special presupposition. One may suggest that relativity of truth is included in the affirmation that judgments are held to be true by some and to be false by others. But this affirmation only claims the relativity of the recognition of truth, not the relativity of truth itself.

Despite the difficulty of defining relativity of truth, we cannot dispense with the use of this rather ambiguous concept. It could not be doubted that absolute truth is sometimes denied; and this denial may be held to be equivalent to an admission of relativity of truth, whatever that may mean. And although, as we have tried to show, even the affirmation of mutually contradictory statements is not necessarily tantamount to an affirmation of relativity of truth, such a defiance of the Law of Contradiction seems to be at variance with the notion of absolute truth and to suggest relative truth.

Now democratic régimes allow the free adherence to and the free exchange of mutually incompatible, mutually exclusive views. But this does not mean that the State accepts logical contradiction and denies logically self-coherent, non-contradictory, absolute truth. If I allow people to emit and to diffuse the mutually incompatible statements "A is B" and "A is not B," it does not mean that I hold both to be equally true, each in a relative way. To leave the utterance of a statement unimpeded does not mean to take it up as one's own.

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Two possibilities are to be discerned. In some cases the State does not know which of the admitted alternative statements is true. Then it leaves the decision to free discussion. The free comparison of the arguments in favour of each of the conflicting propositions is likely to lead to the removal of the uncertainties, to the emergence of absolute truth. "*Du choc des opinions jaillit la vérité.*" The untrammelled consideration of the various opinions is the necessary prerequisite of the discovery of the only truth. The admission of free discussion is not opposed to absolute truth; on the contrary, it serves the cause of absolute truth. In other cases the State knows the truth. It is aware of the absolute truth of the judgment "A is B." Even then it may allow free discussion and leave contradiction unrepressed. It assumes that free discussion will clear up the doubts and dispel the errors. Finally the hitherto unrecognized truth will triumph and win general assent. Moreover, the State may hold public adherence to the false statement "A is not B" to be politically and socially harmless. In no case does the liberal attitude imply the relativist denial of absolutely valid truth.

Yet, on the other hand, it must be recognized that the free admission of logically incompatible statements may spring also from a creed of Relativism. The very fact that a multiplicity of statements is allowed to circulate irrespective of their mutual agreement or disagreement suggests the possibility that the broad-minded government which is responsible for these liberties holds the conflicting statements to be of equal value, a value which is not that of absolute truth.

Now we have to take into account the fact that liberty of opinion in free democratic States is more or less limited in actual practice. There are "reserved subjects" the State takes special care of. The dissemination of some privileged views is enforced by compulsion. The utterance of statements in which the privileged views are exposed to doubt or denial is resented, discouraged, and in some cases prohibited and made impossible. The views in question are usually those in which the external and internal stability of the State is engaged. Patriotism and loyalty to the State are the keynotes of the regions of thought the State chooses to withdraw from the sphere of unfettered liberty. The more liberal the State the less place it leaves to this exceptional intolerance. But a fringe of intolerance exists even in the most liberal States.

When the State is in external danger, the compulsory enforcement of loyalty expands. The field of State-reserved thought grows very considerably; in some cases it may invade something like the whole of the intellectual life of the nation.

These developments have curious consequences. The obedience to some ideas is claimed as an unbreakable duty. It must be absolute.

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In so far as this obedience presupposes assent to some propositions, the propositions must be adhered to without any wavering, doubt, or limitation. These State-protected, State-backed propositions are imposed as an absolute truth. But the same phenomena have another aspect too. The State-imposed propositions are to be held true independently of free investigation, independently of being tested by the standards of objective, absolutely valid truth. Such testing is excluded as dangerous to the absolute stability of the State-decreed beliefs. In so far the attitude of the State denies absolute truth in its logical necessity. The epistemology implied in this attitude is quite peculiar and utterly different from the normal and regular epistemological ways of the free democratic State. This epistemology is only an exception in democratic communities, although it is, as we intend to show, the ordinary rule in the modern dictatorial State.

The dictatorial State of our days claims absolute power over the whole of the lives of its subjects, and, first of all, over their minds. The dictatorship is firmly resolved to make any kind of opposition impossible and to guarantee the unlimited durability of its complete mastery over the minds. Accordingly, it must enforce a permanent and general adherence to a State-favoured system of thought. It must tend to subdue the whole horizon of popular thought to the supremacy of the dictatorial interests.

The State-imposed system must extol and glorify the nation and its dictatorial rulers, including the political party from which they sprang. The devotion of the nation to itself must coalesce with the devotion to the dictators, the latter being described as the superior incarnation or quintessence of the nation. In so far extreme respect for the rulers must appear to the mind of the people as the best expression of national self-respect. The State-desired devotion must find itself favoured by views in which the ruling group appears as the possessor of qualities implying perfection. These views deemed favourable by the dictatorship expand into a system of thought which is imposed as an unshakable, unquestionable, absolutely valid truth. But we shall see that dictatorship, at the same time, ascribes to the statements it lays down and to which it commands belief —only the value of a non-absolute, relative truth.

It is forbidden to doubt, to question, to criticize, to investigate, to test the dictatorship imposed beliefs. The dictatorial ideas must be accepted independently of rational and empirical testing. In democracies the admission of rational and empirical thought-testing is the rule. Even the fitness of the government is subject to such testing under normal conditions. Under dictatorship both the perfection of the government and any other State-favoured object of belief are to be accepted blindly.

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This untested dictatorial belief may remind us of traditional religion where we are exhorted to believe independently of Reason and Experience. There is, however, an essential difference. In religion the object of belief is transempirical. In dictatorship it is empirical, at least to a very considerable extent; the dictatorial government and its work are located in the world of common experience, and not among hidden noumena, not in a necessarily veiled intelligible world. And these empirical dictatorial realities are to be believed in unempirically.

This curious unempirical belief in empirical realities bears some analogy to a phenomenon in another field. The German psychologist N. Ach has noticed that sensuous presentational phenomena (images) can be thought of (*i.e.* judged about or remembered) without any sensuous imagery. I can remember a past sense perception without experiencing any images resembling the sense phenomena of the remembered perception. This non-sensuous representation of sense phenomena reminds us of the unempirical belief in empirical realities under dictatorial régimes.

It might be objected that the dictatorships do not exclude experience and do not rely on mere belief without empirical corroboration. We know that the dictatorial régimes indulge in spectacular display, in loud and gaudy advertisement, thus supplying their populations with experience likely to confirm the merits of the government and the veracity of its affirmations. Popular belief is in so far being given an empirical foundation.

But this experience is not a free experience. Only favourable instances are open to inspection and admiration. Their official description is often exaggerated and sometimes delusive. It is made impossible to question or to verify the State-recommended experience. The unfavourable experience is withheld, withdrawn from the public eye. To try to make it known is a punishable offence. These conditions hold for any views the State is determined to impose upon the popular mind; only exceptional, one-sided and strictly controlled experience in favour of these views is admitted. Free observation is excluded.

It could be remarked that the situation is not exceptional. In religion, too, we find corroboration of unempirical beliefs by some empirical evidence: the miracles. The miracles, too, are an experience which has to be accepted uncritically, without the possibility of free examination. There is, however, an unmistakable difference between religious and dictatorial belief: the miracles are empirical manifestations of a transempirical reality, whereas the objects of dictatorial belief could claim no such transempirical character.

What was said about experience is applicable to any other kind of proof, *e.g.* to reasoning. Dictatorships aspire to confirm their

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views by all sorts of reasoning. To this end they encourage journalists, publicists, and scientists to be their spokesmen, regarding their offices as existing to support dictatorial views by reasoning. Here, too, reasoning is unfree. Only favourable trains of thought are admitted, and their impartial examination is impeded. Unfavourable reasoning is banned.

Again we find here a resemblance to some religions which admit reasoning within the boundaries of apologetic corroboration, but ban it in so far as it may question or contradict the tenets it is only allowed to confirm. But once more we must keep in mind the difference: religion deals with transempirical objects, while in dictatorship no such transcending of experience is involved.

Dictatorship excludes free reasoning and free experience. But it uses both reasoning and experience in its own work. *E.g.*, it uses them in its diplomacy, sometimes with much subtlety; and in its internal policy, often with much cunning. It favours natural sciences and their technical applications in which it sees a promise of increased economic and military power. And natural science, pure or applied, implies a very vast and intricate interplay of experience and reasoning. All this many-sided practical use of Reason and Experience in dictatorship does not alter the fundamental opposition of dictatorship to Reason and Experience as absolutely valid, universally recognized, and freely accessible sources of truth.

Dictatorship affirms and proclaims the absolute truth of its views. The absolute validity of this dictatorial affirmation is connected with the proclaimed absolute worth of the dictatorial State, with its veracity and trustworthiness. The absolute truth is somehow centred or rooted in the absolute worth of the government.

That truth should be held to flow from an assumed privileged authoritative source is a most widespread phenomenon. After all, we assume the truth of many judgments on the ground of our assuming the trustworthiness of those from whom we learn the said judgments. But, as a rule, the assumed trustworthiness is not the *ultimate* source of the assumed truth. Of course, while relying on information supplied by others, we found our assurance on explicit or implicit judgments about the knowledge, the erudition, the truthfulness, the sincerity of the person from whom the information is drawn. But, after all, we assume the trustworthiness of our teachers only because we hold them to be acquainted with a truth, inaccessible to ourselves, which is valid intrinsically and independently of its being affirmed by any set of persons, however qualified. The *ultimate* source of truth lies in its intrinsic nature, not in its being affirmed by authorities. This is our attitude towards scientific propositions we have to "borrow" without examination from those who are scientific authorities in our eyes. The described connection of assumed truth

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and assumed authority is quite different from that found in dictatorship. In the latter case the truth is supposed to flow *ultimately* from the assumed value of the supreme authorities: the dictatorial government. There is no question about an intrinsic truth-value as different from that of the authorities. The absolute truth of the State-protected propositions and the absolute worth of the rulers are merged into an indissoluble whole. The official truths are true because they are pronounced by the absolutely trustworthy government; and the government is trustworthy because the assumption of its trustworthiness is one of the absolutely valid truths.

Under such conditions the dictatorship cannot admit any absolute valid truths whose validity is guaranteed by any other criteria but the proclamation by the dictatorship itself. Therefore dictatorship must ban objective logical validity as a criterion of absolute truth. Objective logical value is a source of truth different from that of the dictatorial truth-proclaiming State. The dictatorship is essentially jealous in matters of public epistemology. It cannot admit objectively valid absolute truth because it claims the absolute truth-value for its own propositions independently of their possessing objective logical validity.

The incompatibility of absolute dictatorial truth with logically valid objective absolute truth has various aspects.

First, dictatorship is afraid of admitting truth-standards extraneous to itself because the admission of such criteria does not strengthen the dictatorial prestige and may even weaken it. The prestige must be all-embracing, monopolistic, exclusive. The admission of non-dictatorial truth-sources would mean a sharing of the supreme intellectual authority of the State and might lead to dangerous movements of the popular mind. Some people might test the dictatorially backed propositions in the light of competing criteria, and the testing might lead to the rejection of the said State-favoured propositions. Logically valid, objectively absolute truth is such a competing and potentially dangerous, virtually subversive criterion, that dictatorship must oppose it.

Secondly, the recognition of objectively valid absolute truth may imply its recognition even in the case of its being discovered and propagated by persons or groups different from or hostile to the dictatorship. But dictatorship scorns the recognition of value in individuals or groups outside itself. It declares itself to be the *only* truth-producing or truth-announcing agency. Besides, hostility to other groups is often a very important and sometimes essential part of the dictatorial thought-systems. To recognize that strangers might be sources of truth is a dangerous heresy in the eyes of the dictatorship. We could mention the most violent Bolshevik opposition to any non-Bolshevik, non-proletarian thought, scientific or artistic.

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In Germany we witness the same violence of opposition to diverse products of thought on the ground of their being non-Nazi, non-German, non-Aryan. Now, as we said, the recognition of objectively valid, absolute truth may lead to recognition of truths emanating from strangers: objective validity of truth is held to be independent of the personal identity of those who discover or diffuse it. Here dictatorship finds another motive for its hostility to logically valid, objectively absolute truth.

The absolute dictatorial truth is not the logically valid, objective absolute truth. The two absolute truths are in mutual opposition. Objective absolute truth is opposed to political absolute truth. The assumption of a special political absolute truth as different from objective absolute truth is the most salient feature of the epistemology of dictatorship. We must add the following remark: Political absolute truth is the truth whose claims to be such are based on being issued by the dictatorial political authority. This does not mean that the contents of the political absolute truth must be political. The political authority of dictatorship covers also non-political subjects. Propositions of all kinds may be invested with political absolute truth.

The affirmation of political absolute truth means the denial of objective absolute truth. But the denial of objectively absolute truth is an assumption of the objective relativity of truth. The politically absolute truth of the dictatorship is objectively relative. The objective relativity of the dictatorial truth finds expression in its being grounded on the utterances of the chosen dictatorial leaders. The dictatorial absolute truth is relative to the dictatorship which is its source and criterion.

The dictatorial epistemology teaches both an absolute and a relative character of the same truths. And their absolute character (the political one) is logically rooted in their relative character (the objective one). Only the denial of the severe standards of objective absolute truth opens the way for an untested and unhampered display of political truth-creation. Only if objective absolute truth is discarded, political truth can be absolute in its relative way. Only if the dictatorial truth is objectively relative can it be a politically absolute truth.

We have attempted to give a general and rather abstract outline of the epistemology of dictatorship. This outline finds confirmation in the actually expressed attitudes of modern dictatorships.

The most popular epistemology in the Soviet Union seems to imply the repudiation of objectively valid absolute truth. There is, teach the Soviets, no universal truth common to all mankind. There is a bourgeois truth and a proletarian truth. Proletarian truth is to be imposed as an absolute truth. Bourgeois truth is to be rejected.

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The search for an objectively valid, impartial, absolute truth is a bourgeois activity of a dangerous character. The exclusively proletarian, but absolutely valid truth is less an attribute of thought than a characteristic of action, of work. Every variety of activity breeds the corresponding truth. The Socialism-building proletarian work of the Soviet State has its own truth, the compulsory, practically absolute proletarian truth. This absolute truth is relative to Bolshevik dictatorship and to its activity.

Italian Fascism, as expounded by its philosopher Giovanni Gentile, declares itself to be a doctrine which tends and claims to control not only politics, but also the will, the feeling, and the thought of the nation. Having its centre of gravity in politics, Fascism deals with moral, religious, and philosophical problems. It denies value to a thought that is not expressed in action. It identifies thought and action. Furthermore, Gentile declares that religion and morals should be subordinated to and fused in the authority of the State.¹ Truth is thus made subservient to politics, to Fascist politics. Thought must obey action, the action of the Fascist State. This means the rejection of objectively absolute truth in the name of what is true on account of its being demanded by Fascist politics. The truth that is rooted in the active will of the State is relative to that will. It is absolutely valid (as a political truth) despite this essential relativity.

One of the leaders of Hitlerite Germany, Alfred Rosenberg, has sketched a philosophy of Hitlerism. Rosenberg denies science that is independent of race. Science must be determined by the blood. Thought and will must be brought into agreement with the German racial soul, with the Nordic tradition. National honour and national freedom must become the highest value, the beginning and the end of thought. These ideas must rule dictatorially; only on that condition could a nation be preserved and become a State. At the same time, Rosenberg declares the national honour, this supreme arbiter of thought, to be a myth. This myth has the character of a volition which must be our reply to all questions and doubts.² These views amount to a denial of absolute truth. The criterion of true thought is a will of a national group, rooted in its blood, in its conception of national honour. And this obviously relative truth is to rule dictatorially as an imposed politically absolute truth.

The attempt to give truth a purely practical character which seems to be a peculiarity of some dictatorial epistemologies reminds us of Pragmatism. An indirect influence of Pragmatism on the epistemological views of some dictatorships is not impossible. But there is a striking difference between the epistemologies of Prag-

¹ Giovanni Gentile, *Origine e dottrina del Fascismo*, pp. 35-52, Roma, 1929.

² Alfred Rosenberg, *Der Mythos des kaiserlichen Judentums*, pp. 22, 117, 139, 236-237, 486-493.

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matism and of dictatorship. Pragmatism holds truth to be relative to practice, but does not hold it to be absolute at the same time. Pragmatism does not assume, like dictatorship, the absolute value of the relative truth. Besides, Pragmatism assumes different kinds of practice, different practical interests to which different kinds of pragmatically valid relative truths may correspond. Dictatorship knows nothing of peaceful and tolerant ways. It is essentially intolerant. Its truth is relative to one privileged kind of action, to one supreme practical interest.

One may argue that the dictatorial way of recognizing a statement not to be objectively true and of claiming its absolute value at the same time is a self-contradictory way of thinking. The denial of objectively absolute truth of a proposition and the affirmation of its absolute truth under the aegis of dictatorial politics seem to contradict each other. Now some psychologists (especially M. Lévy-Bruhl) describe primitive man as illogical and prone to contradiction. Primitive man is supposed to assume the same thing to be at the same time at different places. He is supposed to assume that a name is at the same time both identical with and different from the thing named; that a dream image of a person of which we dream is both identical with and different from that person. And one might be tempted to affirm that the attitude of dictatorship which deliberately enthrones contradiction as a foundation of publicly recognized truth is a relapse into the ancient attitude of accepted contradiction.

It is difficult to say whether the dictatorial attitude in epistemology is really contradictory. The denial of absolute truth and its affirmation at the same time is a self-contradictory attitude if the truth affirmed and the truth denied is the same truth. We might, however, assume that politically absolute truth is quite different from objectively absolute truth. In this case there is no logical contradiction in affirming the first and denying the second. At any rate, there is no proof of illogicality being limited to our remote ancestors or savage contemporaries. Indulgence in some contradiction is an attitude or a weakness that seems to haunt us even to-day. While perceiving physical things we both identify our sense-percepts with the physical object and distinguish them from it. This is only one instance of our unmitigated logical carelessness. If dictatorial epistemology is self-contradictory, it might be a new expression of our perennial inconsistency.

While discussing the epistemological views in liberal democracy we have noticed that the liberal State admits objectively absolute truth as an ideal freely to be pursued, but takes up a different attitude in exceptional cases in which the search for objective absolute truth is hampered or made impossible, while a relative

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State-proclaimed truth is given a coercive politically absolute value. We have seen that this situation, exceptional in freely governed communities, is the universal law under modern dictatorship.

The situations in which liberal democracy recurs to this back-sliding on its fundamental and usual principles are the situations of alarm and danger, sedition and war. War is the most characteristic occasion, and the last world war was a stupendous example of war-induced deliberalization of liberal democracy. The epistemology involved in such cases is the epistemology of war. In dictatorship the "war-mentality" which is only a tragic and heroic exception in liberal communities invades the very foundations of social life and becomes its natural horizon; dictatorships tend to be militarist. And they quite naturally develop the "epistemology of war" and adopt it as a normal and usual attitude.

Objective absolute truth is denied by mighty leaders and by the vast human masses they conduct. Of course, as pointed out above, objective truth is presupposed even under dictatorship in various branches of practical activity, and especially in applied science. But in deeper, less immediately practical, less technical matters objective absolute truth is discarded. New peoples may add themselves to the formidable multitudes that already embrace the dictatorial creeds and their epistemology. And even the universal adoption of dictatorship with its peculiar epistemology does not seem to be impossible.

But the value of objectively absolute truth is intrinsically inviolable (*e pur si muove*). This truth would retain its unimpaired validity even if there was no human mind to long for it and to recognize it. And the capacity for seeking objective truth and appreciating it after its discovery is an essential and necessary characteristic of the human mind. Human responsiveness to intrinsic values is a necessary counterpart of the validity of these values. And Man is necessarily responsive to logically valid truth, although he is also liable to error and, as we saw, inclined to inconsistency. If the epistemology of dictatorship succeeds in obscuring and oppressing the effectual exercise of this truth-seeking disposition, it will remain a potential and latently lasting possibility. And earlier or later the dormant possibility will blossom into actual fact. The attempt to change human nature by means of coercive decrees must fail even if the decrees are welcomed with continent-wide cheers and applauded by ardent millions. The unchanging intrinsic worth of the valid values will attract chosen heroic pioneers and, perhaps, martyrs of a new freedom that must follow the new wilfully servile age, darker than the Dark Ages of the past. Meanwhile we have to face the possible approach of an era in which human thought might endure the overwhelming pressure of the epistemology of dictatorship.

GREAT THINKERS

(II) PLATO

PROFESSOR G. C. FIELD

It is really impossible to say anything worth saying about Plato in general within the limits of a single article. Indeed, the more one studies Plato the more impossible does it become—if the concept of degrees of impossibility may be used in a philosophical journal. The reasons for this are manifold. The first lies in the supreme greatness of Plato as a thinker. Hardly anyone who has made a serious effort to study Plato has escaped receiving the impression of him as probably the greatest thinker of all ages. The difficulty is intensified by the particular form in which his greatness is conveyed to us. One may make a distinction, a relative distinction at least, between different philosophers in this respect. With some, their message is conveyed to us with comparative rapidity, even perhaps on the first careful reading, and subsequent study adds little except in the way of detail. Among these it would perhaps not be unfair to place Hume. Others, on first reading, will appear obscure and difficult, sometimes even repellent. It is only after a much more careful study that their real greatness emerges, and they may go on increasing in stature at every subsequent reading. Such, I believe, to be the experience of the majority of readers with Kant. Plato is almost unique in that he makes his impression in both ways. Almost everyone is captivated by him at first reading, but it is only to those who take the trouble of reading him again and again with the intellectual effort that he himself would have demanded that his full store of riches is revealed, if, indeed, it is ever completely revealed to any one person.

To bring out the true width of range of his thought, we may suggest another distinction between the methods of different philosophers. There are some whose main contribution to thought consists in a few comparatively simple ideas. They take these as the basis of their system and apply them to all the particular problems with which they deal. Once one has grasped these fundamental ideas, it is relatively easy to see how the rest of their doctrine follows. With others, and these the greatest, we find a continually fresh approach from different aspects of experience and a continual readjustment of their theories to these. It is easy to see that this type of philosopher can be discussed from almost every angle of our experience, and that

we cannot really do justice to them until we have done this. Plato is emphatically of this latter type. He was a systematic thinker in so far as he was always striving to make his beliefs coherent with each other. But he continually considers them anew in connection with different particular problems, and to each of these particular problems he has a fresh contribution, from which we can always learn much, independently of his general theory. Thus, for instance, when he discusses the status of sense-perception in the *Theaetetus* or the psychology of pleasure in the *Philebus*, we can, it is true, see the connection of his results with his other theories. But we can learn a great deal from what he has to say on these particular problems, whether we accept his other theories or not. It follows from this that any attempt to summarize Plato within a short compass would inevitably do him a serious injustice.

We are not yet at the end of our difficulties. A further difficulty arises from the character of his writings. As everyone knows, he has left us no systematic treatise in which his doctrines are set out in the manner to which we are accustomed with most philosophers. Instead we have a series of dialogues, or dramatic conversations, dealing with a variety of particular subjects, in most of which Socrates is the principal speaker, and in none of which Plato himself appears at all. The significance of this fact has been very variously estimated. We need not linger here over the well-known Socratic controversy. It is still maintained by a minority of scholars that in most of the dialogues the views put forward are those of Socrates, and not necessarily those of Plato at all. The majority of scholars have not found this convincing. But in any case, pragmatically speaking, Plato and the Platonic dialogues are identical. The only Platonic philosophy to which we have access is the philosophy of the dialogues, and it is that philosophy which has been an influence and an inspiration for subsequent generations of thinkers.

But even allowing for this, to extract a philosophy from the Platonic dialogues is not always so easy. When we examine them we find that they take the form of a series of occasional essays, each in a special setting of its own, and each dealing with its own particular problem. The general points of view from which these problems are approached are very often implied rather than stated, and when stated, very rarely argued at length. I have elsewhere¹ compared the task of extracting a philosophy from the dialogues with the task of tracing the course of a submarine mountain chain by the peaks which appear here and there above the surface. And I still think that this metaphor is accurate, so far as any metaphor can be.

The result of all this is that there must necessarily remain a good deal of room for difference of opinion in the interpretation of Plato.

¹ See *Plato and His Contemporaries*, p. 58.

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Still more, of course, is there room for selection of the particular aspects of his many-sided thought which appeal most to each reader. But even the differences and the difficulties of interpretation are themselves instructive and can afford a stimulus to our own thought. It is a tribute to the impression that Plato makes that so many different schools of thought have sought to find something in his writings which would support their own doctrines. They have often succeeded, though in some cases, it must be confessed, not without a good deal of manipulation of the evidence. But just as most doctrines of importance have had some truth on which they base themselves, so those who claim the support of Plato have generally found some element in the richness of his thought which has stimulated them in the direction in which they have gone. Yet it would not be paradoxical to say that Plato has often exercised his greatest influence on those who have misunderstood him. Certainly the schools which succeeded him and which bore his name represented only fragmentary parts of his real teaching. If we feel that we appreciate his thought more to-day than ever before, it is because we have learnt from the mistakes of our predecessors.

The conclusion is that, in an article such as this, it is only possible to indicate some of the chief lessons that the writer personally carries away from the study of Plato, with a warning that this is only a selection from a much larger whole, and that another individual might very likely make an entirely different selection.

I. Perhaps the first impression that we take away with us from the reading of Plato is of his faith in reason. This statement is open to possible misunderstanding, and it would be as well to say a word of what it does not mean before going on to consider what it does. It does not mean that Plato believed it was possible to find out all about everything by sitting in his study and thinking out a theory, without any reference to practical experience or to the observation of observable facts. This point of view has often been ascribed to philosophers, probably untruly in most cases, and certainly without a shadow of foundation in the case of Plato. He was perfectly well aware of the importance of experience and observation in their proper place. But he insisted that it was only by hard and systematic thinking that we could learn how to use them rightly. I have argued this point at greater length elsewhere in this Journal,¹ and I need not repeat the argument here. Nor does it mean that Plato had any exaggerated belief in the reasonableness of human beings. This belief, too, has often been supposed, with very little foundation, to be characteristic of philosophers, but it is certainly the last charge that one could make against Plato. It is clear that he thought that there would never be more than a small minority of human

¹ In an article "Plato and Natural Science," *Philosophy*, Vol. VIII, No. 30.

beings who were capable of reaching complete rationality, and only for them would it be possible after a long and strenuous course of training.

It does mean that he thought that hard thinking was the only way to arrive at truth, and that to arrive at truth was the most important thing for any human being. There was for him no alternative method, no short cut, to this goal. He was not, as has sometimes been supposed, a religious mystic, if by mystic we imply one who claimed to arrive at the highest knowledge by some special and direct kind of experience, different in kind from the experience of ordinary thinking. Still less would he ever have thought that any kind of truth could be revealed by the aesthetic experience, the "fine frenzy," of the poet. Many literary men who have not been over-fond of hard thinking themselves have tried to claim the support of Plato for some such point of view as this. Their knowledge of Plato rarely seems to extend beyond a few brief selections of special literary interest, culled from two or three dialogues. In Plato's own writings there is no vestige of support for this view. If we are to believe that he meant what he said, he would have repudiated it with scorn and indignation.

His belief in reason is one of the foundations of his general view of the nature of reality. He took over from Parmenides the fundamental principle that what is fully real must be intelligible and what is fully intelligible must be real, and he applied this unflinchingly throughout. This is a principle which has often made its appearance in the subsequent history of philosophy. It appears, for instance, in Descartes, in his statement that the clearness and distinctness of ideas was the test of their truth. How Plato developed it we shall see more in detail later. But we may observe here that he was saved from the danger of a too rigid application of this principle by his recognition of a realm of half-reality "rolling about between being and not-being," in his lively phrase. This is the fleeting and obscure world of material physical objects, which will always contain an element inaccessible to pure reason. But even this world we can only understand and deal with in so far as it approximates to the world of scientific and rational thought.

He applies this general point of view especially to the guidance of our own conduct, both in our private lives and in our social and political activities. He was born in an age in which critical examination of accepted standards of conduct was widespread. And the first results of this, as was natural, had been mainly destructive, so that many things which had before been taken for granted without criticism were now being doubted, and there seemed nothing certain left. There were many men in Plato's youth who were saying, as timid minds have said in all ages, that all this criticism was dangerous

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and unsettling, and that men ought to go back to the unthinking acceptance of the old standards. It was probably from his master, Socrates, more than from anyone else, that Plato learnt the lesson that the only way to meet the dangers of critical thought was by further and deeper thought. There was nothing to be gained by an attempt to stifle the reasoning powers and to refuse to face the new ideas. His whole treatment of moral and political questions is based on a plea for the application of hard and systematic thinking to the problems of conduct and on faith in the possibilities of this. The advocates of "national planning" in our own day might well return to Plato for their inspiration. But he would have extended his planning very much beyond anything that is proposed by them.

II. There is another characteristic of Plato which is to be found in the thought of nearly everyone who has attained supreme eminence as a thinker. That is the combination of a keen interest in the results of the scientific thought of the time with an equally keen interest in the problems of conduct, and a conviction that our interpretations of both these aspects of human experience must somehow be connected with each other. The special form in which this was developed by Plato was in his famous Theory of Ideas, or, as it is sometimes and more correctly called, his Theory of Forms.

As far as one can judge, he came to this theory by working from two directions simultaneously. On the one hand, he realized that all our moral thinking implies the notion of an ideal of character or conduct to which our individual actions and our individual lives might approach nearer and nearer, but which it was impossible that we could ever completely realize. At the same time, we could not think of this ideal as merely something which we made up for ourselves, for the whole of our moral judgments imply that we are not free to make up our ideals of conduct according to our individual caprice, but that there is a right and a wrong in them; that is to say, they are something there to be discovered. In other words, they have reality, and for Plato the most complete reality possible.

Plato's investigation of the science of his time led him in the same direction. The most fully developed science in ancient Greece was, of course, mathematics, and it was to this that Plato turned for the type of true scientific knowledge. He found that in mathematical thinking also we are dealing with entities which are not completely found in the material world of sense-perception, but which are none the less real objects of knowledge. The most obvious and familiar instance of this can be found in geometrical figures. We know that we cannot draw an absolutely straight line or an absolute circle. We can, of course, make our lines thinner and thinner or straighter and straighter, but we can never reach the

line as geometrically defined. In the same way, in other branches of science, we deal with absolutely rigid bodies or absolutely pure fluids, though no such things are known in what we usually call the real world. Yet we certainly do not invent them. They are there to be found out about.

It is easy to see that we can come to think of the relation between the mathematical object and the approximation to it which we find in the material world as analogous to the relation between the moral ideal and our approximation to it in our own conduct. It was the discovery of this analogy which was the most characteristic feature in Plato's theory. These real ideals, whether found in the objects of mathematical science or in the realm of moral judgment, are called by Plato by a name which is most closely represented in English by our word "form." That is why we speak of the theory as the theory of forms.

This theory received many interesting and some extremely obscure developments at Plato's hands, and a number of points in its interpretation are still matters of dispute. But its main lines are pretty clear and were never departed from by Plato. On the one hand, we have the world of Forms, which Plato calls the world of Being (as we should say, the real world) or the intelligible world. This is the object of scientific knowledge; that is to say, our judgments about it are definite and unequivocal and, if true at all, are absolutely true. It is also permanent, in the sense that it is unaffected by the passage of time; for instance, a fact in pure mathematics is a fact always and everywhere and in all circumstances. And it exists independently of our knowledge of it, as something there to be discovered. On the other hand, we have what he calls the world of Becoming, that is to say, the continually changing world of physical nature, which he also calls the object of opinion or belief. None of our judgments about this world are absolutely and unequivocally true; they have only a limited pragmatic validity. They are approximately true, or true in certain senses, or true enough for practical purposes. But there is only this degree of truth and reality about them because and in so far as their objects approximate to the world of Being. Plato expresses this relationship, which we have here described as "approximation," by various phrases, such as "sharing" or "participating," or in other contexts "imitation."

The possible applications of this theory are numerous. It gives a special turn to the problem of the relation between the universal and the particular, which has interested so many generations of philosophers. For Plato the universal is never something which is completely in the particulars, but always an ideal towards which the particulars approximate, or in which they participate to a greater or lesser degree, without ever quite reaching. We can see, if we try it,

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how fruitful this idea can be in our handling of the facts of the sensible world. When, for instance, we are looking for a definition of a class of objects, we shall often go astray if we try to look for a single quality which is fully present in all these objects and nowhere else. We shall find it much more helpful to look for a kind of ideal Form to which the particular objects approximate more or less nearly. Aristotle's philosophy, which was based on the belief that the universal existed in the particulars, broke down when the belief in the absolute fixity of natural species and their sharp distinction from each other had to be abandoned. Plato's theory would have been perfectly capable of dealing with this fact.

Again we may see how this theory was able to set modern scientific investigation on certain lines which it has followed since. For Plato, we can only deal with the physical world at all in so far as we can discover in it approximations to the nature of the intelligible world. And the special form which he gave to the notion was the demand for the expression of the results of our investigations in mathematical terms and the consequent insistence on the necessity of measurement as precise as possible. This is certainly an idea which has played a great part in the progress of science. We must not, of course, fall into the error of talking as if Plato had in any way anticipated modern developments of scientific and mathematical theory, but we may claim that his theory, or something very like it, could have come to terms with these later developments to a degree which would have been impossible for any other early philosophy. It is noteworthy how a thinker like Professor Whitehead, when he attempts to base a philosophical system on the results of modern physics and mathematics, produces, as he fully recognizes, something which is much closer to the system of Plato than to that of any other philosopher.

One of the most interesting special applications of this general theory is to our thought about human conduct, particularly political and social activity. We get the most complete expression of this in the *Republic*. There Plato insists that the first duty of a real statesman is to have a clear and definite conception of the ideal state at which he is aiming. Only so can we have any standard by which we can judge of actual or proposed measures and by which we can guide our practical efforts. But he is perfectly clear that this ideal state is not something which can be applied ready-made to actual conditions. Indeed, it is the essence of his doctrine that the ideal state is never absolutely and completely attained, any more than, to use his own comparison, a picture can be entirely identical with the original. Just as an artist who wishes to produce as good a likeness as possible works with his eye always on his original, so the statesman must always keep his eye on the ideal in order to attain

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as nearly to it as the circumstances and material in which he works allow.

III. The third point on which something must be said is on the religious beliefs and attitude of Plato. And here perhaps more than anywhere it is necessary to beware of the temptation of trying to force Plato's thought into modern moulds.

Plato undoubtedly was a man of profound religious faith, but we must not necessarily assume that this faith took the forms with which we are familiar in Christianity. He believed that the existence of God could be rationally proved, and there are plenty of indications in the dialogues of the lines on which he thought this proof must proceed. The proof is based on the general nature of the material physical world. We have seen that he regarded this physical world as only an imperfect approximation to the real world of the Forms. But a further point of great importance is that even the relation to the real world that it has at any one moment is never permanent. In other words, the material universe is continually changing, both in its qualities and in its spatial relations. Now this fundamental fact of change and motion cannot be explained by relation to the Forms. The Forms are the principles of permanence and stability. Nor is there anything in the nature of matter itself which can set it in motion, or account for the fact that a particular material object at a particular time participated in a particular Form. In our own experience we find that it is only animate bodies which have the power of moving themselves, and we therefore come to the conclusion that soul must be working throughout the physical universe to account for the fact of change and motion. Further, this motion and change (especially when seen on a large scale, as in the motions of the heavenly bodies) are found to be orderly, regular, and subject to law. And this is a proof that it is not merely soul, but rational soul, or mind, which is working throughout it. And this rational soul or mind which works throughout the physical universe is what Plato calls God.

Now the activity typical of a rational soul or mind is activity with a purpose directed to some end. We must therefore consider the activity of the soul which is working throughout the universe as animated by a purpose. If we ask what that purpose is, the only reply possible is that it is to bring everything to the utmost perfection of which it is capable. We must add also that in accordance with the most probable interpretation of Plato's statements, the standard of goodness or perfection is to be found in the eternal Forms. These exist in their own right and are not themselves in any sense created by mind, even the Universal mind. They are rather the objects of mind's knowledge and provide an independently existing standard which mind discovers and towards which it directs its endeavours.

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The idea that the Forms themselves are the "thoughts of God" is a product of later speculation, and according to the best modern scholarship is not Platonic.

Be that as it may, it is clear that for Plato all the processes of the physical universe are in some sense an expression of God's purpose, that is to say, they are controlled and directed by a mind or spiritual principle working through them. The lesson for us is that we have for our own sakes to co-operate with, or conform ourselves to, the working of this purpose. For Plato, as I should interpret him, there are two fundamental elements in the religious attitude proper to man. There is firstly the sense of our own insignificance and of the unimportance of our own private and personal desires as compared with the purpose of the whole; and secondly there is the sense that by the conduct of our own lives we are taking part in a great enterprise in which the soul throughout the whole universe is engaged.

We get the impression in certain passages that Plato believed that this attitude was to a certain degree fostered and expressed by various religious ceremonies. It is clear, however, that he did not think the particular form which these observances took mattered very greatly. Indeed, as far as we can judge from his writings, the whole matter of forms and ceremonies took a very secondary place in his mind. The primary and fundamental expression of this religious attitude was for him to be found in right conduct, the pursuit of virtue and the avoidance of vice in our daily lives. And this found its highest form in the activity of the true statesman. The highest good of which man is capable is to co-operate in the realization of the ideal community. This is, for him, the supreme expression of religion, and he nowhere assigns to religion any great importance apart from its expression in conduct. We may say then in general for him religion is not a form of activity distinct from morality, but a spirit in which morality is pursued.

It must be admitted that this interpretation of Plato's religious views would not meet with universal acceptance. There are certainly individual dialogues in which he appears to be taking a rather more other-worldly view. Yet, be it noted, when he does speak, in terms which suggest the language of religious mysticism, of a possible experience which has an independent value beyond that of practical morality, such language is used not of a specifically religious experience, but of philosophical and scientific understanding of the Forms. There is little or nothing in his writings about the personal relation of man to God which is such an important element in Christian religious experience. Such, at any rate, is the impression left if we read his writings as a whole, without letting our judgment be too much influenced by modern preconceptions.

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These then are some of the impressions which are left most strongly on the mind of one reader at least by a study of Plato's dialogues. But, of course, they are only a small selection from a much larger whole. And no brief summary can do justice to the wealth of stimulating suggestions on almost every philosophical problem that anyone can derive from a reading of the dialogues. We may conclude with yet a further suggestion about the necessary incompleteness of our understanding of Plato.

It has been suggested above that Plato for us necessarily means, before all else, the author of the Platonic dialogues. Though we are well enough informed about the main events in Plato's life, and have a few precious indications of his personality from his letters, yet it remains true that as compared, for instance, with our knowledge of any modern philosopher, we know very little indeed about Plato apart from his writings. We know enough, however, to realize that for Plato himself and for his own contemporaries the writings would have seemed a comparatively minor part of his services to the world. He tells us more than once in his letters that the most important part of any man's teaching is what cannot be expressed in any single treatise or collection of treatises.

If Plato himself had been asked what part of his activities he regarded most seriously, he would, there is very little doubt, have named the establishment of the Academy, the school or college which he founded when he was about forty and presided over for the remaining forty years of his life. From the longest and most important of his letters we learn that his early interests and ambitions were primarily political, and though as time went on he found that there was no place for a man such as he was in the practical politics of his time, yet he always maintained the belief that some contribution to the welfare of society was the highest duty of any man. It is clear that his primary purpose in founding the Academy was to provide a training which might eventually produce a number of men of the type that he felt was really needed for the government of the state. As far as one can judge, there was no previous institution of exactly this type, and Plato may fairly claim to be the originator of the whole idea of the organized educational foundation.

How much actual practical effect Plato's work had on the political life of his time is very difficult to estimate. But one may say with confidence that the popular idea of him as a mere theorist, whose ideas had no actual or possible effect on practical politics, is founded on nothing but ignorance. We have excellent evidence that in many states in Greece Plato's pupils were recognized as expert advisers in questions of legislation. Plato's own intervention in the political affairs of Syracuse, the story of which has been told too often to need repetition here, was doubtless not very successful. But the

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suggestion which is often made, that this was only one more example of the inability of the theoretical philosopher to apply his ideas with any effect in practice, is quite baseless. Plato himself, as is evident from his letters, never expected that very much good could come of it. The fact was that the practical men had got the situation in Syracuse into such a hopeless position that there was really no way out, and Plato's failure was no more conspicuous than that of anyone else who intervened in the affairs of that unfortunate city. But there is every evidence that in the object which he really did set before himself, namely that of educating the kind of man who might, when the opportunity arose, do really valuable service, Plato attained a considerable degree of success.¹

At any rate, this may serve as a reminder that so far as our knowledge is restricted to Plato's writings, we only know half of Plato. It is interesting to wonder whether his stature would be increased or diminished in our eyes if his personality had been presented to us as vividly as, for instance, he himself has presented the personality of Socrates. Doubtless we might find in him, as in every human being, certain small weaknesses which would not show themselves in his writings. In one of his letters, for instance, there are traces of a not unamiable fussiness about small details. But this, as we can see from many modern examples, is quite compatible with the greatest intellectual attainments and moral elevation, though some scholars have been so shocked by the suggestion that a great philosopher could have any human weakness at all, that they have declared the letter must be a forgery. As far, however, as we can judge, the feeling he aroused in those with whom he came most closely into contact was one of almost religious veneration. At any rate, there is nothing in anything we know about him which need in any way detract from the profound impression that his writings make on all those who study them seriously. Indeed, they gain in their effect when we realize that they were written by a human being and not by a mere personification of philosophical and literary virtues.

¹ I have discussed this more fully in *Plato and His Contemporaries*, chapters ii and iii.

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G. R. G. MURE, M.A.

I

§ 1. Of all the subjects which for well over two thousand years have remained the more or less constant topics of philosophical discussion, I can think of none which has not at some time by some philosopher been dismissed as a nonentity or an illusion. The history of philosophy seems to show that we cannot begin fairly to estimate the nature of any element in the universe until we have steadily contemplated a universe from which that element has been hypothetically eliminated.

§ 2. The theory that change is an illusion came very early in the history of Western thought—almost as soon as change ceased to be an unquestioned assumption and men began to wonder what it was. Parmenides' defiance of the senses, and his conception of the universe as a solid plenum without variety or change, were the main stimulus provoking classical Greek philosophy. Some consideration of them ought, I think, to preface any discussion of change, for the Greeks discovered most of the difficulties of the subject.

§ 3. Parmenides reached his paradox by pressing to its logical conclusion the general principle of his predecessors' thought. The monists of Miletus had each posited a single permanent substance as constituting the essential nature of the universe. It is commonly called a material substance - Thales, of course, said that it was water, Anaximenes that it was air - and they are commonly called materialists, but one must remember that within their substance, or in respect of their substance, there was for them no distinction of matter from form or from spirit. They were not materialists or atheists such as to rouse the indignation of a Berkeley; they were even ready on occasion to give their substance the name of "God." Perhaps "corporealists" would be a better name for them. The point here is simply that they regarded this substance as eternally underlying and explaining all the qualitative differences which display themselves to sense-perception at any moment, and from moment to moment unfold themselves in endless fresh diversity. They set out to explain the world in terms of what they thought

¹ The substance of two inter-collegiate lectures delivered at Oxford in January 1934.

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it was made of, assuming that such an explanation would be final; the process of the world's making, its transition from permanent substance to unceasing sensible diversification, they merely took for granted.

§ 4. Heraclitus, however, the last of the monists, was not quite so innocent. The ever-changing face of nature excited his imagination as it had failed to excite that of his predecessors. He took fire for his substance, but he put forward a relativist theory of diversity and change which is not really at all consistent with the notion of an eternal underlying substance. Almost one might say that in the hands of Heraclitus the underlying substance which had been posited to explain change became change itself. He remarked that one can never step twice into the same rivers, but he might have said even more plausibly that the flames which leap and fall continually, as they consume fuel and pass into smoke, have no bond of sameness in them to make them one.

§ 5. After this the retort of Parmenides was inevitable. If, he said in effect, what is fundamentally real is single and eternally the same with itself, then (*a*) it cannot be a unity of variously characterized elements, nor be in itself in any other way variously characterized; and (*b*) it cannot *become* diversified. For (*a*) we can only think what *is*; what *is not* is unreal and therefore unthinkable. If, then, x differs from y , we have to say that x is not y . But to predicate not- y of x is to predicate not-being of x , which amounts to saying that x is unreal, is not itself; for if x is real it is *ex hypothesi* eternally itself. Hence the one real substance cannot be one as a unity of different elements each of which is none of the others; for it would then be a unity of unrealities. And it cannot be a unity of various characters; for to affirm any one character of it would be so far to deny its other characters of it, i.e. to predicate not-being of it.

In respect of (*b*) the argument is essentially the same. If the diversified world of sense is what the one substance comes to be, then the one substance comes to be other than itself. But that is again to predicate not-being, unreality, of what is *ex hypothesi* absolutely real. Parmenides actually puts this by arguing that whatever comes to be must come to be either out of what *is not* or out of what *is*. But it cannot come to be out of what *is not*; that is patently absurd. And out of what *is* it cannot *come* to be; for there is nothing but what *is*.

§ 6. Now the theory of the negative judgment on which these arguments are based will seem obviously untenable to us all, but it paralysed philosophy for nearly a century. Efforts were made to meet the charge of deriving change *ex nihilo* by multiplying the primary substance, or by positing a mass of corporeal atoms differing

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only in size and shape; but they failed to overcome the fundamental objection against the very nature of diversity. Finally Plato in the *Sophist* showed that sameness and difference, so far from being incompatible, are only intelligible if taken together. He pointed out that the not-being which is predicated in any significant negative judgment is not unreality, but just that character of otherness which belongs as fundamentally as does sameness to anything in the universe, and indeed to the universe itself. As the Latin phrase *aliud aliud* aptly expresses, everything is just as much *not* anything else as it is itself: it is other just as much as it is self-identical.

§ 7. This immensely important advance in the analysis of negation does not, however, constitute any refutation of Parmenides as a critic of the eternal substance theory. Parmenides' logic is the logic proper to that theory, the only logic by which it can claim to be judged. If you maintain that the real essential nature of the universe is an eternal homogeneous stuff out of which it is made, then you will in the end be forced to admit that your stuff not only cannot contain diversity but also cannot transform itself into diversity. For your substance is fully real *as such*. It only *is*, and is self-identical: it cannot also be other. Plato's solution, on the other hand, makes the real as fundamentally other as it is self-identical. It implies that so far as the universe is a corporeal whole, change is no more secondary and derivative than is rest. Where they appear, the two characters are co-ordinate and inseparable: whatever changes rests from change—or at least, as is the case with the eternally revolving heavens, has in it a correlative stability—and whatever rests is *eo ipso* liable to change. The eternal substance theory in its present shape collapses, and the problem must assume a fresh form.

§ 8. This fresh form we shall shortly have to consider. In the meantime there is one last point to be emphasized in connexion with Parmenides. He held the universe to be one solid, motionless, corporeal plenum. But if we examine his view as a positive theory and not as a mere piece of criticism, it becomes clear that he has no right to assert even so much as this. For example, rest, or immobility, and corporeality are two diverse characters, and they are, moreover, general characters of sensible objects. How, then, can they be attributed to a real One, which, whatever it is, is at any rate not the object of our illusory sense-perception? Parmenides leaves us in no doubt that the One *is* corporeal, and he argues that it does not move because a necessary condition of motion would be void, and void would be not-being. But to call the One either corporeal or motionless is on Parmenidean premisses quite unjustifiable. Indeed, it cannot on his principles be the bearer of diverse characters at all, sensible or otherwise. If you push the One to its logical

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conclusion, it must turn out to be a mere "thing-in-itself"; in fact, just nothing at all.

§ 9. We can now perhaps conveniently sum up what we seem so far to have learnt about change. Three closely connected conclusions emerge:—

(1) The problem of unity and diversity is one problem, whether it arises as the question how one substance can be the bearer of various qualities, or whether it comes before us as the problem of change, *i.e.* as the problem how a thing can *become* diversified and yet retain self-identity. That this is a single problem is what the multipliers of the primary substance, Empedocles, Anaxagoras, and also the atomists, failed to see, but Parmenides makes it quite clear.

(2) It is one and the same in principle to attempt to explain what anything really is by analysing it in terms of an ultimate simple constituent or constituents, and to attempt to explain it by tracing it back to its temporal origin in something simple out of which it has come to be—or, if you like, which has come to be it. And in either case the effort is bound to fail: the simple constituent or the simple original source will inevitably turn out to be not a fundamental reality but simply nothing at all.

(3) Rest and change are characters which are inseparable in whatever they characterize. You cannot, therefore, derive change from rest: you cannot explain it in terms of that which is static. What has, in fact, to be explained is a world of alternating and correlated rest and change. Change implies a permanent which changes, but the permanent persists in and through the change; it does not underlie it as the reality of which change is the secondary and perhaps illusory manifestation. This is so wherever there is change. If we praise the constancy of a lover or the enduring quality of a great idea, we do not thereby mean to extol a rigid fixity rejecting and refusing change. A passion or an idea which cannot renew itself does not constantly endure: it suffers the change of death. When we use such language we are taking the half to express the whole: by constancy we mean consistency, by endurance a continuance of fruitful vitality. And I think we can make no exception in favour of a material universe. Unless we steadily maintain this reciprocal implication of change and rest, we must either with Parmenides posit an ultimately static reality which will on closer inspection turn out to be nothing at all, or else we must deny the permanent altogether, as Heraclitus came near to doing, and put our faith in an absolute flux within which there is no tie of sameness to hold together its fugitive phases.

§ 10. Now we might suppose ourselves to possess in these results a satisfactory solution of the problem. The universe, we might be

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tempted to say, is unity in and through diversity. And this unity in diversity in its essence is not the mere unity of a substance in a fixed diversity of qualities. So to view it would be to take it in abstraction from its own full nature. It is, in fact, both the outcome and the source of change in which it is throughout immanent. It is in its essence concrete change. In concrete change, we might go on to say, there is not mere flux or transiency, masking a purely static real from which it emanates in some mysterious and probably illusory fashion; nor in the world as concrete change are there static and transient elements co-ordinate and juxtaposed—a relation, incidentally, which I do not know how to express intelligibly at all. Rather, as Mr. Collingwood would put it, the two concepts overlap: what would by itself be merely static, and what would by itself be mere flux or successiveness, are fused in one nature, and that one nature is the essential nature of the universe.

§ 11. All this we might be encouraged to say, but should we have explained what change is? I think not. For if the universe were concrete change in the sense which I have tried to give the words, flux and permanence would be so fused in every phase of that change that there could remain no difference of phase from phase. The whole universe would, on this hypothesis, enter as a self-identical whole into each and every phase of itself. Perhaps in the end we shall find that in some sense it does, but on our present hypothesis it would so enter that its self-sameness would be total and consummate in each phase. It would contain no principle of differentiation in itself, and its phases would collapse helplessly into one phase, which would not be a *phase* but a changeless state—if, indeed, it would be anything at all. And the same would hold good of a limited subject of change, if it were possible on this hypothesis 'to distinguish any limited subject of change.

It seems, then, that we must cast back. We cannot maintain the complete fusion of permanence and flux in every phase of change.

§ 12. It might now be suggested that within each phase of any change there is partial fusion or overlap, but that the subject of change is complete only in all its phases taken together.

Here we must be careful. I think the first part of this suggestion is true, and perhaps also the second; but I do not think that the second part follows directly from the assumption of the first. It doubtless would follow if we could say that each phase contributed a part, and that the whole, the subject of the change, is gradually constructed of such mutually complementary parts. But that is impossible. It would mean that there was no whole until the last phase was reached. It would mean that there was neither any limited subject of change nor any universe until change was over, and that is scarcely what experience suggests. What our experience

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of change does suggest is something different, and I confess that it is a paradox. It suggests that the subject of change does somehow fail to manifest its full nature in any given phase, and does require all its phases for its complete self-expression, but that it yet does enter into each and every phase as a whole. The phases are in some sense complementary, but they are not complementary parts; for each of them is a phase which the subject assumes *instead of* the previous phase, so that in every stage of change the subject is present as a whole, and yet in every stage it appears to have suffered a gain or a loss in completeness.

§ 13. This view of change, according to which the phases are in a sense complementary and yet in a sense alternative, does imply the partial overlap of permanence and flux in each phase. But it does not directly explain how the subject of change can be complete—if it is complete—in all its phases taken together. It is not easy to see how a whole can be a whole of phases which are at once complementary and alternative. It suggests something like a woman who possesses a complete wardrobe of clothes for all the day's occasions, and tries to attain the perfection of dress by wearing them all at once. Yet, difficult as this view is in itself and in its consequences, we seem to accept it every time we call a thing by the same name both before and after it undergoes a change; for we do then imply that the whole and not a mere part of the thing is present throughout the process. Therefore I think we must examine this notion of partial fusion or overlap more closely, and not at once reject it for its seemingly self-contradictory character.

§ 14. Certain corollaries, I think, follow obviously from this paradox of complementary yet alternative phases, for which we have had to relinquish the hypothesis of a completely concrete change. (a) If the phases differ from one another according to the less or greater completeness of the subject of change in each of them, then these differences will fall into an order of degree. (b) The ordered series of phases may proceed from less to greater completeness, or from greater to less; and this at any rate suggests that all change is transition to or from a climax, a culminating phase of completeness. In other words, we have reached the familiar notion of development. We are to work with a teleological hypothesis in respect of all change: to endeavour to explain it wherever it occurs as an ascent towards, or a decline from, the self-consummation of the subject of change.

§ 15. Now I wish to try to expand this interpretation of change for a few minutes, but I do not wish to give the impression that I find it easy. I will point out one obvious objection to be met which may in the end compel us to modify, if not reject, the whole hypothesis. It will be said that if at its climax the subject of change

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is fully perfect and complete, then the comparatively imperfect phases must lose their aspect of complementation and with it all meaning and reality. They will become utterly otiose, and change will turn out to be no less illusory than Parmenides believed. We might perhaps evade this criticism in respect of any finite subject of change by saying that just because it is a finite thing it can never have a climax which is a complete perfection, but in the case of the universe considered as the subject of change that would be no answer. For if the universe at its climax is incomplete, if never and in no sense is it fully perfect, the problem is merely postponed: we shall be asked by what right, by what standard, we judge it to be always and in all senses incomplete. And if at any moment or in any sense it is complete and perfect, then that it should require complementation by lesser stages of its own perfection looks like a flat contradiction.

§ 16. However, let us for the present persevere. That all change is development or decay was the solution propounded by Plato, but elaborated in more definite detail by Aristotle. Aristotle's position is roughly this. All change is to be viewed teleologically. Any changing thing, animate or inanimate, is at a given moment either at a zenith of maturity in which its essential nature is fully expressed, or else it is either ascending to or declining from such a zenith. If you try to define a maturing or decaying thing, it is only by reference to its zenith that you can do so; so that what you are then in fact defining is just the essential nature, and all you can add to your statement of that essence is the mere negative reservation that the thing has not yet reached, or has already passed, its zenith; which is to say that it does not yet possess, or that it has now lost, its essential nature. A child and a dotard, so far as they have positive reality, are just that essence of manhood which the dotard once embodied, and the child gives promise of embodying. Thus potential and actual are on this theory strictly correlative terms. Potential being—as when a child is said to be potentially a man—is, as it were, a loan, a reality borrowed from actual being; but it is a loan on good security. At any stage of change before or after its climax the developing or decaying thing is actual in so far as it is not at maximum distance from its climax, *i.e.* in so far as its essential nature might be less fully realized than it is; the thing is potential in so far as it is unrealized and fails to embody its own essential nature. Thus the essential nature, which Aristotle calls the form, is (a) that in terms of which the changing thing must be defined; (b) it is the end, or final cause, which motives the development of the thing from imperfection to perfection. So Aristotle's teleology is an explanation of things strictly in terms of value. A thing can be defined only in terms of its own characteristic excellence, and this

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characteristic excellence is the only cause which can be rationally assigned to a process of change.

§ 17. Moreover (*c*) this perfection which is at once the formal cause of the developing thing and the end, or goal, of its process, its final cause, is also the efficient cause of change, inasmuch as nothing begins to develop until a mature, actual, embodiment of the form sets the change going. *E.g.* a child develops into manhood, which is at once its essential nature and the end of its process of development. But the process cannot start until an actual adult man initiates it in the sexual act. In the realm of explicitly purposive change, *i.e.* the sphere of action, the principle is the same. An end to be actualized is the final cause of action, and the action is definable as good or bad according to the goodness or badness of that end, which is therefore the formal cause also of the action. Moreover the end, as a vision ideally present to the agent's mind before the action, is his motive, the efficient cause of his action.

§ 18. Even in the inanimate world an analogous teleology holds good. In all inorganic change which occurs necessarily and intelligibly Aristotle sees final and formal as well as purely *a tergo* efficient causation. When there is no apparent final cause, either our insight has failed—as is to be expected in the relatively imperfect and undeveloped world of inanimate nature—or else, as he sometimes seems to allow, something in its own nature really contingent has changed really accidentally. But such a contingent event, if it does occur, is not rationally explicable. It is no matter for science. In general, inorganic process, even where it is not obviously teleological, as it is where it subserves organic process within a living body, nevertheless does manifest final cause. I will spare you the details of an obsolete physics, and take only one example. According to the Aristotelian theory of gravity, earth, the heaviest of the four elements, falls because its essential nature is to move towards the centre of the universe. That is its *natural* place, and it most fully manifests its true form, its real nature, when it reaches the centre of the material world.

§ 19. One last point will connect this theory with Parmenides. According to Aristotle, if you analyse a changing thing at any given stage of its process, you can distinguish in it its matter and its form. So far as it is actual and developed it is form; so far as it is merely potential it is matter. Thus matter and form are simply the respective static aspects of potentiality and actuality. Matter is not a positive something at all: it is the element of potentiality which dwindles as a thing develops and increases again as it decays. It is called by Aristotle the material cause of the changing thing, and it is a necessary condition of change. But such positive character as it appears to possess is really only conferred upon it by form. Thus

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you may analyse a living body into (a) the form of life, the unity of function which makes the living being what it essentially is, and (b) the material body which subserves life, and you appear to have reached two positive factors. But the material body is itself a union of matter and form, and upon further analysis into matter and form will reveal simpler and simpler constituents. Hence *logically* the ultimate term of this analysis will be what Aristotle calls primary matter, a matter bare of all form, a potentiality quite unactual; i.e. a logical limit and not a positive physical constituent at all.

Thus by Aristotle the corporealist eternal substance theory is exactly reversed. It becomes evidently useless to seek the essence of things in an ultimate constituent or a primitive condition—Aristotle realizes clearly that the principle is the same in either case—for that path leads not to reality but to nothingness, to primary matter. The real nature of things is revealed only in their climax.

§ 20. In this way Aristotle, developing Plato, replies to Parmenides with a thoroughgoing teleology. It can only be judged fairly in the light of his whole metaphysical system, and I do not suggest that even when so elucidated it offers a solution which wholly satisfies. I have sketched Aristotle's conceptions of potential and actual being, and of all change as necessarily a development or a decay, only for the purpose of indicating in outline how one may set about explaining change on a teleological hypothesis. I propose now, not to elaborate this quite general hypothesis, but to endeavour to test it in a sphere in which it seems *a priori* most unlikely to be verified. This will compel me, much against my will and far beyond my competence, to hazard some remarks about modern physics. For, if there be worlds in which there appears to be change without development, worlds whose elements apparently are in process, but do not in that process realize less or more of an excellence which is their own essential nature, one of them at any rate would seem to be the world of classical, or pre-quantum theory, physics. It is a world I come to as a stranger. Yet sometimes the impressions of a tourist have a vividness which continued residence tends to dull. In the hope that such an impression may be mine, and with the proverbial insolence of tourists, I shall dare to pass comment on some of the sights which may have grown too familiar to the natives.

(To be continued)

THE PSYCHOLOGY OF ETHICAL EMPIRICISM

PROFESSOR A. C. FOX

THE bearing of certain psychological doctrines upon ethical theory is important, and has been made use of especially by those who espouse empiricism in Ethics. It is the purpose of this paper to examine some of these leading doctrines and the ethical theory which has been connected with them. In doing so, it is appropriate to select for examination the views of Professor W. McDougall, as expressed principally in his *Social Psychology* and *Outline of Psychology*; and this for two reasons. One is, that these views are significant of much more than the opinions of one man. They may be taken quite fairly as representative, in the main, of a definite body of doctrine concerning the nature and development of moral experience. This doctrine inevitably contains much psychology, and in the hands of Professor McDougall it is expounded by a psychologist of eminence and with a good deal of detail; moreover, he often makes large excursions beyond the bounds of psychology into the domain of Ethics. The second reason is to be found in the widespread circulation which McDougall's writings (chiefly his *Social Psychology*) have enjoyed. I am aware that his position has often been criticized, notably and at some length by Dr. H. Rashdall; but I hope that what follows will be more than a going over old ground once again.

I

It may be assumed that Professor McDougall's accounts of the nature of a sentiment and of the development of self-consciousness are so well known as to require no more than an outlined description. A sentiment is the organization of emotions (or instinctive dispositions) around the idea of some object, the idea being the nucleus of the sentiment. In this connexion we may notice the clear separation which he makes between cognition and conation. He refers to "the obvious fact that the development and organization of character, or of the conative side of the mind, is largely distinct from and independent of the development and organization of knowledge, the cognitive side of the mind." But if cognition and conation are largely independent, and if a sentiment is a system of conations, by what means is this system formed? One might be tempted to say that the bond of union is the nuclear idea, especially if every conation

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is excited by a cognition, and if the energy of an evoked sentiment does not flow towards the idea but away from it.¹ This is not McDougall's explanation, however; rather does he say that "the oftener the object of the sentiment becomes the object of any one of the emotions comprised in the system of the sentiment, the more readily will it evoke that emotion again, because, in accordance with the law of habit, the connections of the psycho-physical dispositions become more intimate the more frequently they are brought into operation." This is an explanation in terms of frequency and habit. Frequency, however, is not indispensable, as a single experience of striking character may create a firm bond between idea and emotion.² In any case, we have here an appeal to principles of association and habit; but in the *Outline of Psychology* McDougall is careful to tell us that "I now see clearly that motor habits are not in themselves springs of action"; and that the only other form of association (*i.e.* other than neural, which produces motor habit) is "mental" association or association by meaning, which involves "the true thought factor."³

If, then, habit *does* nothing and neural association is ineffective, we must evidently explain the systematizing of emotion in a sentiment by "mental" association, the "true thought factor," which works in virtue of that continuity of interest which Stout also has emphasized. This means that there is a unity within which diverse items are associated together, and apart from which there could be no association. This unity has the character of "true thought," whatever other character it may possess. Why not admit that it is the original unity of the mind displaying itself in *cognitive* oneness? McDougall comes very near to this, not only when he relates thought to "mental" association, but also in his indictment of Associationism for its exclusion of "subject" or "self" as a necessary explanatory postulate. We must therefore come back to that which presented itself as the *prima facie* source of system in the sentiment— the nuclear idea, or (as McDougall in his later book prefers to name it) the cognitive disposition or system. If "cognitive system," by what means is this system formed? And does a sentiment now show itself to be made up of two systems, one cognitive the other conative? If so, how is the conative system formed, if simple association and neural habit must be ruled out? If it is formed by the activity of the subject, is this a different subject from that which is active in forming the allied cognitive system? But if it is the same, and if a sentiment is not two systems, but one, yet having two aspects, it may be claimed that systematizing activity belongs properly to the cognitive aspect

¹ *Social Psychology*, p. 126 (references throughout are to the 16th edition).

² *Ibid.*, p. 127; pp. 163-4.

³ *Outline of Psychology*, pp. 218 and 303.

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rather than to the other. The various emotions are able to enter indifferently into an indefinite number of sentiments. If it be said that they are not precisely the same emotions in varying sentiments, then the only way of differentiating them is by their cognitive aspect. It is evident that there is no organizing power in the emotions if they are separate from cognition; and if they are not separate, it is because they have a cognitive element that they are susceptible of organization. It is to the cognitive activity of the subject (which McDougall admits is the one agent in all forms of mental activity) that we must trace the organization of its mental life: system lies there or nowhere.

Turning to McDougall's description of self-consciousness, we learn that to be self-conscious is to have a sentiment organized around the idea of the self. The distinctive thing about the self-regarding sentiment is in "self" and not in "sentiment": there are many other sentiments which in principle are the same as this, but there is only one self-sentiment. It is also clear that the system of this sentiment will be of a peculiar kind. Every sentiment is organized around and by a cognitive system, but that which lies at the centre of this sentiment is itself the active subject of all mental organizing. That is, the essence of self-consciousness is the cognitive system which the subject more or less, explicitly, elaborates. This has an important bearing on volition, which is closely related to self-awareness, and on the nature and origin of moral judgment, as we shall see. In the meantime McDougall's intention is to introduce order into the emotional and instinctive life by showing the unity and complexity of emotions in the sentiment; but he also aims to show that this unity is imposed from without, in true empirical fashion: how else are we to interpret his express statements as to the way in which a sentiment is formed? He desires also to exhibit the genesis of self-consciousness in the same empirical way, only here the matter is a little more complicated. Self-awareness is closely related to a certain sentiment. The sentiment grows in the prescribed way, but the *consciousness* of self is presumably a distinguishable element which (since it is "obvious" that the development of cognition and emotion are largely independent) has to be separately accounted for in its growth. Particularly has it to be given an empirical origin: cognition is not peculiar to self-conscious beings.

But this empirical intention fails of success in several ways. (i) The systematizing of emotions into a sentiment fails of accomplishment unless there is an internal, and cognitive, basis of the system: an *experienced* unity or system cannot possibly be created purely *ab extra*. If it be objected that the unity need not be experienced it is a disposition what point is there in claiming that sentiments deliver the emotional life from chaos to order? Doubtless

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the chaos would be experienced, and therefore also the order. Further, the peculiar nature of the cognitive system which lies at the centre of the self-sentiment—a system elaborated by the subject—means that it must arise from within and cannot be taken over from without, or even receive its chief causal influence from without. This leads to the remark (ii) that the derivation of cognition of self from a cognitive condition in which there is no native readiness for it can succeed only on the supposition that selves (and things) are already fully constituted objects, and in their own right, upon the first attempted awareness of them, and that the mind displays no activity in this awareness. But this twofold supposition cannot be made. Before the mind can draw upon selves and things it must have consciously separated itself from them, and have become self-aware before and as a clue to awareness of them. Moreover, there is no such thing as passive knowing. In a word, there may be a genetic account of self-consciousness as to its content but not as to its form. To be sure, form and content are inseparable, and one may not be known without the other; but (a) it is certain that the *form* of self-awareness is not derived from without—it is known immediately and “internally” or not at all; (b) the very first *content* of self-awareness is derived internally; and (c) although an externally originating provocation may be necessary to (a) and (b), and so be part of their cause, it cannot be the essential part of the cause, else would it provoke a similar result in all other things whatsoever upon which it could have influence, *e.g.* stocks and stones. The essential part must be a native readiness to be a self: and this is formal. (iii) The separation between the cognitive and conational factors in self-consciousness will not march. For one thing, it savours too much of that atomistic psychology which McDougall rightly reprobates. For another thing, it is admittedly impossible to have either cognition or emotion *in vacuo*: are not the emotional qualities “the cognitive basis of self-knowledge”? The impossibility of sustaining the separation is so far acknowledged when with self-knowledge is closely associated a sentiment of self-regard, *i.e.* a number of impulses and emotions with their related cognitions.

Apparently the meaning of this is—or should be—that self-awareness is of a varied mental content displaying a certain form or system. Conceivably there could be the content without the form, under penalty of chaos—types of which are given and analysed in the *Outline of Abnormal Psychology*; so that it is the form which is the “self” element. It is well to remember this when we turn, with Professor McDougall, to consider the nature of volition. Facing the question why a weak impulse can be willed into action in the teeth of a stronger contrary impulse, he answers that the explanation is to be found in the sentiment of self-regard, which joins itself to

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the weak impulse and secures its triumph. This is one more victory for order over chaos, since the life of a person who gives way to strong impulses continually is disorderly, and there is lack of order even on occasional giving way. But in volition "the man himself is thrown upon the side of the weaker motive"; to exert will and to be a man are identical, and will is character in action. Conscience is moral character, and character is "the system of directed conative tendencies": "the better organized and richer the intellect, the more efficiently will character work towards the realization of its goals."¹ In the light of these statements we have to understand—or challenge—certain others, to wit: "in considering the genesis of moral conduct and character we need concern ourselves with the empirical self only"; "the empirical self, the idea of his self which each man entertains, plays an essential part in volition"; "the effort of volition is . . . only a more subtle and complex interplay of those impulses which actuate all animal behaviour"; "it differs from other conations not in kind but only in complexity."²

We may accept the general account of volition, and be ready to accept the self in volition as the empirical self, *i.e.* "the idea of his self that each man entertains"; but taken in their context these words might imply the existence of atomistic selves, each of whom has a distinct idea of himself, and between whom there may be nothing common. Now the empirical content of the self may vary widely, as between one period and another of the one person's life, and as between one person and another. It is this content which is strictly empirical; but if we are to speak in this strict sense of the empirical self which plays an essential part in volition, we get no explanation of the matter at all. Volition surely means some degree of steadiness: it means action which expresses to some extent a policy; but there is no guarantee of getting steadiness or a policy out of "impulses which actuate all animal behaviour," or out of the kaleidoscopic variety of the empirical content of mind. Moreover, moral conduct admittedly has a reference beyond the self to other selves, and implies commonly acknowledged or valid standards—a common world of conduct to which the self has to conform. In this common world there must be a thread of identity: each self must treat other selves as selves. The essential identity lies not primarily in contents of empirical kind, but in oneness of the form or general "go" of the minds, or more correctly, in the contents as ordered by this form or "go." It is only if we disregard this form, or believe that man does not differ in kind from the animals, that we can assert that "the effort of volition is . . . only a more subtle and complex interplay of those impulses which actuate all animal behaviour." Professor McDougall

¹ *Social Psychology*, p. 240; *Outline of Psychology*, ch. xvii.

² *Social Psychology*, pp. 181, 246, and 237.

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admits that we have no clear evidence of the exercise of volition on the part of animals. We for our part may go so far as to admit, for the sake of argument, that there is empirical identity between the higher animals and man, *i.e.* identity of instinctive material at the disposal of the will, so that, if animals do not will, the difference cannot lie in content but in something else. But what else is there, except that element which we have mentioned almost *ad nauseam*?

II

McDougall does not claim, however, that the self-regarding sentiment is sufficient (though it is necessary) for moral conduct. He speaks also of moral sentiments, which are sentiments of dislike or liking for abstract objects, *viz.* moral qualities such as dishonesty, untidiness, justice, or truth. These "abstract sentiments alone enable us to pass moral judgments of general validity. . . . (They) are the specifically moral sentiments." The self-regarding sentiment of itself would not necessarily lead to moral conduct, *i.e.* to right conduct, since it might perfectly well consist with overweening self-regard in the bad sense. Neither are moral sentiments for abstract qualities of themselves sufficient; if they are not backed by resolute will they leave the person an ineffectual idealist. The best result is reached when these two sentiments unite under the master sentiment for a completely moral life. This sentiment is apparently an extension of that of self-regard, or is its qualification by the moral sentiments. We are brought back, therefore, to the rôle of the self in morality.

But what exactly do the moral sentiments do, and how do they do it? In themselves they are permanent emotional dispositions towards generalized moral qualities. McDougall's explanation would have us believe that they provide a thorough identification with the social point of view (including in the best type of case what society *should* require), and a conviction that action in accord with these qualities is right or wrong. It is also in keeping with his general genetic standpoint that we should believe the one to be the cause of the other, and in the order named, *i.e.* that conviction of social approval is the source of conviction of rightness, so that if the one comes definitely to us the other will inevitably follow. No doubt there is an intellectual process in forming the abstract sentiments, but this is irrelevant to their main functioning. After all, they are still sentiments, and are created and operate like any other sentiment. They are complex conations, but are only a more subtle and complex interplay of those impulses which actuate all animal behaviour; they differ from other conations not in kind but in complexity. And the intellectual process concerned must be discounted, in respect to its efficacy, in accordance with the general principle that "all the

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complex intellectual apparatus of the most highly developed mind is but . . . the instrument by which instinctive impulses seek their satisfaction."¹ The intellect is the slave of the passions. We are brought then to this position: it is not enough to have sentiments in order to accept the social point of view and to possess the sense of rightness, nor can any intellectual process bring about this acceptance and possession. There must be some further factor which effectually socializes the self-regarding sentiment and endues the moral sentiments with their imperative control over one's conduct. Otherwise volition is egoistic and bad, and the moral sentiments involve at best a detached awareness that society declares certain actions to be right or wrong. This further factor McDougall will have to find on the conational side of our nature.

The missing link is supplied by "active sympathy." It is this which brings effective identification with the social point of view and produces the imperative sense of rightness. It gives the sentiment for self that which in its native egoism it lacks and the moral sentiments their hold upon our conduct. What, then, is this active sympathy, and how does it act? It is "that tendency to seek to share our emotions and feelings with others which is rooted in primitive or passive sympathy and in the gregarious instinct. (It impels a person) to bring his feelings and emotions into harmony with those of others."² It thus works to produce sensitiveness towards moral approval and disapproval, and it is this which "leads on some men to the highest plane of conduct . . . regulated by an ideal." Further inquiry elicits the information that active sympathy is peculiar to persons; and this means, if anything, that it is not one of those impulses which actuate all animal behaviour, and that if it is rooted in passive sympathy and the gregarious instinct, it is a plant which does not produce any flowers until it discovers the congenial atmosphere of human nature—in short, that it is a new factor in man as compared with the animals. Also we are told that it is egoistic, in that it is a seeking of one's own satisfaction. Quite so: how could it be otherwise if it is rooted in simple instinct, and if it is to be, *ex hypothesi*, something which is not an intellectual process? In view of this naïve admission it is hardly necessary to labour the point that a tendency to share our feelings and emotions with others has, as such, no ethical character in it, nor has the gregarious instinct or passive sympathy. To want to cease from loneliness may have no more ethical quality than to want the cessation of hunger or coldness; and there is no necessary moral character in the feeling of someone else's emotions—it comes by "passive" sympathy and simply cannot be avoided. Out of the simple impulse to be with others and the necessity of feeling their emotions, active sympathy is somehow

¹ *Social Psychology*, p. 44.

² *Ibid.*, p. 200.

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derived. But if we remain with others and have our own emotions, the others will feel these in any case, in virtue of their passive sympathy, and we will feel theirs. The only alternative that I can think of is that we should desire, *as a result of thinking*, to bring our emotions into harmony with those of our group. This, however, gives an entirely new turn to the matter, in that it introduces the despised intellectual process, and makes active sympathy logically subsequent to thinking, and also to volition. But this cannot be an alternative, as it is non-empiricist. As to what is meant by an egoistic active sympathy which makes one take the point of view of society and distinguish between right and wrong, it is hard to fathom. No doubt there is a bond of feeling between members of a society, who are held together by something more than a coldly intellectual assent; but is equally without doubt that feeling, like patriotism, is not enough. It provides, as it were, an opportunity or a material, good for social cohesion up to a point, but requiring to be seized and amplified by clear-eyed purpose if it is to yield a human community.

In one place Professor McDougall refers to still another element in the mind as the source of disinterested judgment, viz. the tender emotion, which is the affective aspect of the parental instinct. This is the most powerful of the instincts (we are told), stronger even than fear, since it works directly for the conservation of the species. It is the central element in the sentiment of love and is its main support. Accordingly it is the mainspring of altruism, and McDougall points out, no doubt correctly, that in making this emotion a part of the native endowment of animals and men he is giving altruism its rightful place as an original and not an artificial feature of human nature. To derive altruism from egoism is certainly absurd; but why did he not notice this in dealing with egoistic active sympathy? But perhaps he means that sympathy becomes altruistic when joined with the tender emotion. It is more than doubtful, however, whether a simple instinct of parentalism, admirable though it may be, can function in the required manner. Parental tendencies in themselves are not sufficient to make a right relationship between parent and child, or between children themselves; it is enough to mention unwise parents and spoilt children. And if these tendencies produced harmony within one family, they could not guarantee that there would be harmony between that and all other families, *i.e.* communal harmony. It is the family with a strong sense of its own interest which social reformers have so often viewed with suspicion, and not the family which is such only in name. But any "sense of interest," good or bad, is much more than emotional, even though it include emotion. Disinterested beneficence and moral indignation—in so far as the latter is different from simple anger—demand that emotion be qualified by an attitude more detached and impersonal than itself;

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If it be said that it is the sentiment which supplies the deficiencies of the tender emotion, then we are back at a problem which has already been discussed.

The problem which has been before us recently in this paper is that of the achievement of disinterestedness and the universal point of view in morality. It is the question how the idea of the self and the moral sentiments may be bound together so that each affects the other. We may see the problem most clearly by contrasting two persons, in one of whom there is the self-sentiment and therefore volition, and also the knowledge that society acknowledges certain moral qualities as right or wrong, and in the other of whom there is all this, together with the recognition that the right should be willed by him and the wrong avoided. I assume that the description of the second of these persons represents in a general way a person fully moralized. It would not be enough that the first person exercise volition merely, and be unaware of the standards of the community around him. For one thing, this would be to depict a thoroughly unreal person and make our problem artificial. For another thing, it is not the question to which McDougall seeks to give an answer. That question is more properly formulated in the general way mentioned, and in detail in the following manner:—

There will be certain respects in which the two persons will go together; and to begin with we will describe their states of mind in terms which are identical for both. Imagine either of them saying to himself: I am in a situation in which a certain act may be performed by me; this act will be irksome, and in itself makes me averse from its performance. Shall I will this act? (or perhaps our first person would more likely say, Why should I will it?—we must remember that he is a person who can exercise will). The persons about me call it a just act, and say that just acts are right; moreover they declare that right acts should be done by me. So far the mental processes of the two would be substantially similar, but at this point differences begin. The second will say: I recognize this social judgment as binding on me, and so I will perform the act; the first will say: I do not recognize this social opinion as binding, therefore I will not perform the so-called just act. (The case, however, would be different with this latter person if he believed that society would punish him for his omission; even so, his performance would not be properly moral: he would not do the act because he deemed it right.)

Why is it that the one man wills the act while the other does not? McDougall holds that moral judgments of general validity are based on the moral sentiments, and this apparently would govern his answer to our question. The one man possesses moral sentiments, the other does not, even though he may be aware that other persons possess

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them. This, McDougall might say, is the kind of situation which arises precisely when you make moral judgment simply a matter of cognition, for has not the delinquent full cognition of the moral standard which he refuses to accept? No, he has not. What he knows is, that *other persons say* that just acts are right and ought to be done. What he does not know is, that this opinion is valid for him, or more simply, that just acts are right. He does not know the meaning of the terms "right" and "wrong," but confuses them with the expedient and pleasant, and the reverse; or else he misconstrues these terms as used by others, taking the one to mean that which is usually undesirable (to him) and the other to connote that which is generally desirable (to him). He has failed to establish a common measure between his own standards, according to which he wills, and those of society. What he calls right others call wrong, and *vice versa*. There is an absence of rationality somewhere, and if in this case society is in the right, it must be in this dissenter. (It would be in society if it were wrong, *i.e.* if the dissenter were a genuine reformer who could see ahead of current standards.) It is through this absence of rationality that he lacks *moral* sentiments, though he may have other kinds in plenty—though even this is doubtful. His standard is not the rational, as is that of society (or as his would be were he a moral reformer), but the desirable—that which brings agreeable emotions and feelings;¹ nor could the operation of "active" sympathy—which is "a seeking of one's own satisfaction"—make the case otherwise; active sympathy has nothing to say on the question of rightness.

If we require as to how society gets its common measure, we may get an answer by turning back to the other person in our illustration, the one who wills to do the just act. He does the act that society requires, not because it is a matter of opinion but because it is a matter of right. This means that he has not stopped at the

¹ For these reasons it may seem improbable that he can exercise volition at all. True, he has a self-sentiment, but the idea of self is "a social product," while this man appears to think of his self without contributory relations to other selves—a likely result if selfhood is a purely psychological and non-logical production. He may be willing to speak of the rationality or "reasonableness" of his actions, but as an egoist he restricts the empire of reason to himself, and so empties it of meaning. On the other hand, if willed action expresses a plan, he may be able to have a plan for his life and to suppress some desirable actions which do not fulfill it (cf. Gideon Sarn, in Mary Webb's *Precious Banc*). This certainly looks like volition expressive of reason. Perhaps the solution lies in the acknowledgment that there are degrees of selfhood and volition, and that there is not only the one total self which is fully rational, but there are also partial selves within this: so that a willed act may proceed from the self in a restricted form. The man in question will then be rational, but fail to see—perhaps from emotional causes--the implications of this in a wider rationality.

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common judgment but has measured it by a further standard. He is implicitly or explicitly aware of the fact—highly significant—that the common judgments themselves may have the predicates “right” and “wrong” attached to them. And as a further point in Logic as applied to Ethics, if the proposition “this ought, or is right, to be done because everyone does it” were a valid ethical definition, it should be susceptible of simple conversion to “that which everyone does is what ought to be done”; and not even McDougall would assent to this. We have to admit that the moral sentiments attach themselves to ideas, and moreover to general ideas, *i.e.* to ideas which are the result of an intellectual process. We have to insist that these general ideas must exist first—in logical priority at least—before there can be anything to which the sentiments can attach themselves. And the intellectual process is much more than that of “discriminating and naming the abstract qualities of character and conduct,”¹ for the interest in which these qualities are discriminated and named is *already* a moral interest in right and wrong; for what other reason would the process ever be carried out? If I decide that some acts are just and others are courageous, it is because I have in mind a *summum genus*—right acts—to guide my classification. Even if we discern rightness and wrongness first of all in particular acts, we afterwards make classifications with some clue in mind, and it is the *summum genus* which acts as the clue. If we classify in inductive fashion, as no doubt we do to begin with, the clue will be more or less vague; but it will be none the less dominant, even though its fullness of content is increased as the classifying process proceeds. There is no need to deny the presence of emotional elements in all this, provided we take them as *signs* of the passing of moral judgments and not *criteria* of rightness and wrongness themselves. The obvious fact of progress from defective to more adequate criteria, and the related fact that both kinds of criteria have been accompanied by equally strong emotions, should be sufficient to remove the formation of criteria from the emotional to the rational sphere. Of course, reason may be at fault also in its detailed judgments: we admit its close connection with emotion; but it is not at fault in its major and most general judgment, that which makes the simple and ultimate distinction in ethical character; and we may be thankful that although emotion is able to blur this judgment in individuals here and there, it has not been able to do so in the race as a whole.

III

We must now consider the part played by cognition in moral judgment. Professor McDougall, despite his separation of cognition

¹ *Social Psychology*, p. 219.

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from conation, admits that it takes some part and that even reason has something to do in the matter. But these admissions are qualified in two ways: (i) by assigning to reason a subordinate position: it follows upon and does not direct instinctive tendencies; (ii) by showing that reason itself may be empirically derived from cognitive elements which are to be found in non-rational beings. The first of these qualifications has been dealt with, and we must now turn to the other.

McDougall's quarrel with Rationalistic Ethics is on the ground that it implants reason in the human mind *ab initio*, whereas it is the product of the slow processes of evolution. One of the main defects of this Rationalism, he says, is that it is incompatible with the principle of the continuity of evolution.¹ Presumably this principle requires that the apparently new features which emerge during the course of mental development are not really new, in the sense that they are different in kind, but are simply more complex forms of the more elementary processes which preceded them. So we are told that "the essence of all reasoning is that judgment and a new belief are determined by beliefs already established in the mind."² The beliefs already established have come through perception on the plane of "intelligence"; and we gather that reasoning comes about through, as it were, the clash of two or more of these perceptual judgments. This clashing is the only new feature in the business: the induction or deduction of the new belief is still brought about by the working of the old factor, intelligence. McDougall seems to make the nature of induction the cardinal question here, since he regards deduction as the combination of an inductive generalization with a perceptual judgment.³ In regard to induction he says that "selectivity or sagacity, which is the all-important factor in reasoning of this kind, is not a new factor. It is the same kind of factor which, on the plane of trial and error, makes the process, whether in men or animals, other than a purely random process. It is the factor which at all levels, from amoeba to man, is the essence of intelligent adaptation."⁴ Again: "the tendency to inductive generalization is fundamental, and is exhibited at all levels of mental life. At the lower levels, it is merely the tendency to react to similar things, things presenting similar sensory cues, as though they were essentially the same thing over again."⁵

The question for decision is whether reason reduces without remainder to intelligent adaptation, and is no more than a trial and error process on the perceptual plane. It is important to notice what exactly is the question to be decided, lest we waste our time over a question which is not relevant. We misrepresent the situation

¹ *Social Psychology*, p. 378.

² *Outline of Psychology*, p. 402.

³ *Ibid.*, p. 409.

⁴ *Ibid.*, p. 405.

⁵ *Ibid.*, p. 408.

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if we think of it as an issue between continuity which discounts novelty and novelty which discounts continuity. McDougall stands for the first of these and represents Rationalism as standing for the second: but he misunderstands its position. The Rationalist has no need to deny that there has been a process of development, or to maintain that the coming of new factors means the denial or disappearance of the old. The old factors persist, and so far there is continuity; but they become subordinated to the working of the new, which makes (or may make) use of them for its new purpose rather than *vice versa*. In being so used they suffer a change which, however, does not mean entire alteration. They remain recognizably themselves and yet become different; the novelty into which they enter can be analysed so as to show their presence in it. Our quarrel with Professor McDougall is because he wishes to analyse novelty simply into old factors and nothing else. In point of fact, he does not succeed.

One of the prominent features of his general exposition is his insistence on the all-pervasiveness of purpose: he names his psychology "hormic." He is in rebellion against mechanistic explanations of behaviour. Conformably with this we recall his statement that intelligent adaptation (to which reasoning is equivalent) is other than a random process even at the beginning. We may admit the general claim and sympathize with the motive; but we may ask, what of the principle of continuity? Is not the intelligent behaviour of lowly animals continuous with the preceding stage of presumably mechanical action? If not, why deny the possibility of discontinuity at some succeeding stage in the history of intelligence itself? But if so, may we not expect that the evolution of intelligence, if it is a real and not a nominal evolution, will show a process of development from stages in which mechanism is present and predominant to stages in which, though still present, it is very subordinate? If this expectation is realized, it will be legitimate to describe the earliest stages of behaviour as mainly mechanical and the latest stages as mainly teleological. Now this is exactly the kind of description that McDougall gives. He speaks of "advance from action of the type of immediate response to the impressions made on the sense organs, and an approximation towards complete self-determination. . . . This advance involves also a progress from predominantly mechanical to predominantly teleological determination, a continuous increase of the part played by final causes relatively to that of purely mechanical causes in the determination of the behaviour of the individual."¹

According to this, we must admit that behaviour has a mixed character, and that in its earliest forms it is more heteromatic than automatic. It is teleological, but not markedly so. By teleology is

¹ *Social Psychology*, p. 263.

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meant "that power of mind to foresee the future in accordance with past experience and to govern action in the light of that foresight"; this is mind's fundamental nature, just as its primary attitude is prospective. Now, while man lives largely within a world created by mind, the animal lives almost entirely in a world constituted by external nature. The one therefore can, the other cannot, be mainly moved to action by causes internal to the mind. It is in this fashion that McDougall indicates imagination as the differentia between the two, for "most of the behaviour of animals is initiated and guided by perception." Imagination in turn gives rise to desire in the strict sense, and this is not possessed by animals. "The animal in which any instinctive impulse is excited does not suspend action, even though the action be remote; the impulse probably always expresses itself in action. In this respect our natural man would show his superiority to the animals. He would be capable of the higher form of desire, viz. impulse toward or away from a remote object, with suspension of action. . . . Such suspension of action . . . is the essential condition of all higher intellectual activity, of all thinking in the fuller and more usual form of the word."¹ Notice that action is suspended because thinking is in operation; perception is in abeyance in favour of a "higher intellectual process." And it ought to be plain that this is a description of the beginning of volition, which therefore cannot be explained in terms of the laws of appetite as these operate in the animals. It is a law of appetite in man that he looks before he leaps, and this looking makes all the difference.

This conclusion is reinforced when we consider the nature of thinking, taking it as McDougall presents it to us. He insists that perception is a veritable form of thinking: "to know, to recognize, to be aware of, any object is to conceive it, even when our knowledge is a perceptual knowing. To mean an object is to conceive it. . . . Perceiving is one mode of conceiving."² And he speaks of "the error of supposing that the primitive mind perceives particular individual objects, and that development proceeds by the coalescence of particular 'ideas' to form general 'ideas.' . . . The universal is already implicit in the thinking of the burnt child who dreads the fire, and in that of the animal who flees from all men after maltreatment by one." This reference to implicit universals is very significant; it is made in another way, in the remark that "we begin by cognition of the highly general and proceed gradually to the cognition of particulars." The universals which were implicit at first (in such wise that there is reaction to "things presenting similar sensory cues, as though they were essentially the same thing over again") become explicit as cognition grows. The animal perceives things as objects of certain kinds and as marked by some relatively simple

¹ *Outline of Psychology*, p. 207.

² *Ibid.*, p. 254.

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feature or sensory pattern. Man's knowledge, *per contra*, comprises a multitude of cognitive dispositions which do "not merely coexist, but form a logically ordered system."¹

How can we explain this difference, whereby knowledge which is logically ordered supervenes on that which is not? And is not the logical, therefore, something new? What do we mean by the logical? It is evidently more than a dealing with universals; or rather it is dealing with them in a way that knows them for such, which knows their particulars as details in their systems, and not as though they are the same things over again. Perhaps we cannot explain how this difference comes about, but it is enough for our purpose to recognize it as having come about and as something distinctive. The primary universals are blurred and highly general, because they have not been thought into separation from their particulars, or *vice versa*. The animal who flees from all men because it has been maltreated by one does so because it does not suspend action in favour of cognition; and it fails to do this because it is unable to exercise imagination (to retain the word previously used). That is, imagination creates a mental world connected with, yet vastly amplifying, the perceived world, and within this new world the working of "intelligent adaptation" takes on a new character. Arrived at this point, the mind is freed from the necessity to confuse particulars with one another; it is able deliberately to compare them, *e.g.* to compare the one now present with others previously known, and in the interest of future action. In this way the mind comes into possession of the three temporal distinctions; and it is able to think, to form plans, and to will. But this is no other than the capacity which we call reason, theoretical or practical; and McDougall admits its correlation with logical capacity. In itself it is timeless and is able to transcend time, as we have seen, in the sense that it can grasp past and future in one thought-scheme; it is not tied down to the present and very near the present. It is able therefore to traffick with final causes, to survey its impulses in the light of a policy and choose amongst them, and thus to become predominantly teleological. All this because it has become rational and follows, not the laws of appetite simply, but those peculiar to its own human status. It is and yet is not continuous with the past, since it not only contains but *knows* the past.

This attribution of a *sui generis* character to reason has obvious bearings upon the nature of moral judgment. The impossibility of an empirical derivation of reason from non-rational elements is one with the impossibility of a similar derivation of morality from non-moral elements. Reason is inherent in the moral judgment, and is expressed in the predication of rightness which is the differentia

¹ *Outline of Psychology*, p. 382.

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thereof. To judge morally is to take an impartial point of view, to relate a particular impulse to its universal of volition. Reasoning is not incidental to all this but is its very soul. It is of no value, therefore, to be told that reason "plays a part in all our moral judgments, though reason alone, without the aid of moral experience, of moral tradition, and of the moral character, is incapable of leading us to true moral judgments." This becomes, in the light of the preceding exposition, almost nonsense: moral experience, etc., themselves can come about only by the operation of reason, otherwise how are they made *moral*? On the other hand, it is not nonsense if it merely means that reason does nothing *in vacuo*, that in the moral sphere its occupation is with the whole economy of the mind, which includes instinctive tendencies and related sentiments as well as relatively detached cognitions. And we can assent to the claim that reason is not a conative energy; it is not one item amongst others, just as the moral end is not one end amongst others. Were it so, there could be no possibility of freedom, since there would be no one factor standing out from all others which could give a determinative turn to the course of events; reason would become just one more amongst the multitude of efficient causes. As it is, it is not an efficient but a final cause. It is related to all the other effective energies, not horizontally, as it were, and as they are related amongst themselves, but vertically, in such a way as to survey and embrace them all, and call them all into its service. It is indeed, like its congener volition, the man himself, his central self, and when this real man acts his conduct proceeds from himself and is free. It is reason that should be in mind when it is said that "by a long series of creative acts on the part of men, both small and great, the moral tradition—the highest product of organic evolution—has been painfully and slowly evolved. . . . The belief in a certain creative power of original determination is a necessity of our moral nature."¹

Thus McDougall's attempt to give a purely empirical account of morality has not succeeded. In one way it has failed because it is not empirical enough. In professing to take account of all the relevant facts it has overlooked the most important bit of evidence—the testimony of our moral nature to an element which is other than appetition or perceptual trial and error. In another way it has failed just because of its empiricism. It has not escaped the principal defect of genetic explanation when this is applied to the human mind. Despite McDougall's disclaimer, he really explains human conduct in mechanical fashion, and has not worked out the full implications of the teleological principle to which he pays lip homage. In working for simplicity he achieves falsity of description; and in reacting against reason as utterly transcendent he has gone to the impossible

¹ *Outline of Psychology*, p. 448.

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extreme of relegating it to an unimportant position, after having misconstrued its nature. It may have been noticed, however, that much of the criticism in this article has made use of his own words, which are sometimes available in such a form as to suggest self-contradiction, and to create the suspicion that he may have had qualms as to the validity of his exposition. This becomes more definite when, on the last page of the *Outline of Psychology* he asks, by way of indicating an *unsolved* problem: "Is there any innate basis of intellectual development other than the instincts, the plasticity of the nervous system, and that general power of adaptation to novel conditions which in these pages has been called Intelligence, or in its higher manifestations, Sagacity? . . . Is there anything in our innate endowment that in any manner or degree justifies the old doctrine of innate ideas?" This becomes more definite still in the last chapter of the *Outline of Abnormal Psychology*, when, in reviewing the facts of multiple personalities, he asks: "How can we interpret this evidence if not by assuming with Kant and Driesch that the forms of knowledge or of thinking, the categories of thought, are innate in every mind, a character or possession of mind which is not acquired through experience, but is given in the very nature of mind and to which mind owes its capacity to order the data of sense-experience in the form of time and space and causation?" Had this been made a working assumption in the two earlier books, they would almost certainly have come to very different conclusions about volition, self-awareness, reason, and moral judgment.

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Y. H. KRIKORIAN

THE image of nature as causality has been a major theme of science and poetry. It has been a symbol of hope and fear, of progress and futility. Yet its meaning has seldom been clear. Prior to any statement about the relation of causality to physical nature, life, and mind, its meaning should be established. I shall therefore first define causality, and I shall then discuss its applicability to nature.

I

Causality, like all other types of explanation, is a correlation of given phenomena. To understand the nature of causality, therefore, two questions need to be answered: (1) What are the characteristics of causal relation? (2) What are the properties of causal entities? These two questions are only relatively independent of one another. In our final interpretation of causality the two questions should not be too sharply separated, since the characteristics of entities and of relations are exhibited in their interrelations.

1. *Causal Relation.*—The simplest procedure to determine the nature of causal relation will be to analyse the major characteristics of instances of the causal order. There are different types of order or process. Certain processes are called causal, others casual, and still others purposive. Instances of causal order would be the following: fire melts ice; water quenches fire; bodies gravitate towards one another; a billiard ball strikes another, and the second ball moves. In more precisely stated instances of the causal order one observes that at a given temperature the volume of a given quantity of gas varies inversely as the pressure it sustains, and that the strength of an electric current varies directly as the electromotive force and inversely as the resistance.

There are three characteristics of the above instances of causal relation which are of special importance for the present discussion. Causal relation is non-anthropomorphic, it exhibits uniformity, and is deterministic.

In causal explanation, whether one considers the relations or the entities, anthropomorphism is eliminated. Causal relation is a name for a certain type of order of events, and not a name for the activity of an agency behind events. Causal correlation does not disprove purposes, ends, or wishes, but simply disregards them. It may very

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well be, as great historic religions and idealistic systems have claimed, that the anthropomorphic interpretation of nature is a more fundamental and truthful one, and that anthropomorphism gives a deeper insight into the nature of things than causality; but this claim does not alter the fact that while limited to causal correlations one should not refer to wish, desire, and purpose.

The second characteristic of causal relation is uniformity. Causality refers primarily to the constant features of the given phenomena. The illustrations of causality which were mentioned earlier are all statements of uniformities or constant features which exist between phenomena. The uniformities of causal relations, however, do not deal with the universe as a whole but with specific processes under certain limited conditions. Before one can determine a specific causal relation there must be an isolated system within which it holds. The isolated system may be very broad, as the one in the first law of motion, which includes every particle of matter under all conditions; or it may be more restricted, as in the second law of motion, which is limited to bodies falling under specific conditions. But whether the scope of isolation should be broad or narrow, causal relation applies to limited spheres. There is no causal relation between the infinite whole and its parts. Causality refers to a relation between one part and another.¹ It should also be noted that uniformity or constant relations are sought in terms of numerical relations. In ordinary experience, and in the early stages of a science, the described uniformities are of a general character, such as that all unsupported bodies fall, fire burns paper, etc.; but causal explanation, in its advanced stages, is not content with such vague statements of uniformities. The uniformities which are sought are the ones which can be correlated with precise, numerical relations.

A third characteristic which has often been associated with causality is the concept of determinism or necessity. This third trait of causality has been violently criticized. From Hume to Russell it has been a common contention that necessity is a fiction and that causality merely means invariable connection of uniformity of processes. For the present, without analysing the objections raised to the necessity or determinism of causal relations, I shall limit myself to brief comments on the meaning of necessity, and on the specific sense of necessity in the causal relation.

Though necessity, or determinism, should be a fiction or a myth, it is certainly not a meaningless concept. Hume, who presents the most effective objections to the concept of necessity, was quite certain that the concept had a meaning, since otherwise his criticisms would have been of no importance. What then is necessity? Briefly, necessity refers to deductive systems where from self-evident, postu-

¹ S. Alexander, *Space, Time and Deity*, vol. i, p. 288.

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lated, or "convenient" concepts other concepts are derived. The clearest illustration of the notion of necessity is the concept of classes where the implicative relation is that of inclusion, or that of from species to genus.

Causal relations are deterministic in the sense that cause and effect contain implicative relations. Causal laws connect the elements of experience in terms of some logical or mathematical pattern, and these mathematical patterns are fundamentally assertions of mutual implications between the parts of an equation. Causal laws assert something more than the sequence of events. Day follows night, but we never consider night to be the cause of day. Or cloven-footedness is co-existent with ruminance, but we never interpret this co-existence in terms of causal relation. In causality there is the assumption that a given result is due to, or is determined by, the existence of some other factor. This factor is the principle of identity. To say that the same thing may act on the same thing under the same conditions, yet produce different effects, is to say that a thing need not be what it is. But this is an untenable position. For a thing to be at all it must be something, and it can only be what it is. When we assert that there is necessity or determinism between A and X , what we mean to say is that A acts as it does because it is what it is.¹

2. *Causal Entities*.—Most liberally, causal entities may be defined as perceptual entities. Causality begins with perceptual experience and attempts to make it intelligible. The entities of this stage may be called the pre-analytic entities.² The pre-analytic entities of causality are the events of the perceptual world. These events offer problems. How does wood float? How does reproduction occur? What is the nature of the movement of the heavenly bodies? Another way of stating the pre-analytic stage of causal entities is to consider them as the elements of nature, when nature means that which is "disclosed in sense-perception,"³ and when at the same time it is assumed that nature is something that can be thought of as "a closed system whose mutual relations do not require the expression of the fact that they are thought about."⁴ It is usual, however, to define the perceptual diversities as physico-chemical entities. This second stage is the post-analytic stage of causal entities. Is it possible to frame a definition of causal entities to include various kinds of entities? To select any one of them would be rather arbitrary. What is necessary is to present the most general traits of the different kinds of causal entities.

¹ H. W. B. Joseph, *An Introduction to Logic*, p. 408.

² J. Loewenberg, "Pre-Analytical and Post-Analytical Data," *Journal of Philosophy*, vol. xxiv, pp. 5-14.

³ A. N. Whitehead, *The Concept of Nature*, p. 4.

⁴ *Ibid.*, p. 3.

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First of all, causal entities, both the pre-analytic and the post-analytic types, have their status within the space-time continuum. Causal entities are not purely logical entities; they are existences, that is to say, they can be located in space and dated in time. The spatio-temporal habitat of causal entities differentiates them from other types of entities, such as the logical or psychical. What, then, does status within the space-time continuum mean? For the present we need not settle the question whether space-time categories should be interpreted in terms of the absolute theory or the relational theory; nor is it necessary to determine the further metaphysical question whether space-time is, as Whitehead holds, merely an abstraction from events, or, as Alexander argues, the stuff of which all finite things are made. It is sufficient to say that causal entities have *position* in the space-time continuum. An example of spatial position would be: *A* is to the left of *B*. An example of temporal position would be: *A* stands in the relation of simultaneity or succession to *B*.¹ Causal entities require a system of reference; and whatever one's theory of space-time might be, these categories are taken to be a system of reference; and this is what is important for the present discussion.

Causal entities, in the second place, are physical quantities. By quantity, I do not mean the unchanging reals of the classic physics, but rather entities which are sufficiently constant to have numbers assigned to them by measurement. Causal explanation is functional correlation between variable physical quantities (numbers). Causal entities are therefore measurable. There are, of course, different theories as to what the fundamental physical quantities are. In the traditional mechanical theory of nature the physical quantity was the mass; in the electrodynamic theory it is the electric charge, or the electromagnetic field. The question as to how the property of the physical quantity represented by mass differs from the property of the physical quantity represented by charge is unanswerable in terms of immediate experience. Operationally, however, the difference between matter and electricity is that "the number called the mass of a body is assigned by methods which differ from those by which the number called the charge is assigned, and the mass and electric charge enter into different functional relations with other quantities."² Causal entities as physical quantities are symbols represented by matrices. Causal entities exclude, therefore, vitalistic or non-physical entities; but they should be interpreted with sufficient breadth to include heterogeneous physical entities.

A definition of causality can now be made. In a most general way *causality is a type of explanation which employs only functional*

¹ V. F. Lenzen, *Physical Theory*, pp. 50-84.

² *Ibid.*, p. 283.

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correlations and only physico-chemical entities. Should one prefer a more specific statement about the nature of causal relations and causal entities, the definition of causality would be the following: *causality is constituted in the non-anthropomorphic, uniformitarian, and deterministic correlations between sets of entities which are physical quantities within the space-time continuum.*

II

In the preceding section the meaning of causality was analysed. We now come to another problem related to causality. Is causality applicable to nature? The question concerns the ontological status of causality. To claim the applicability of causality to nature is meaningless unless we can verify our claims. At the present stage of experimental science it is impossible to verify the universal applicability of causality. One has to wait with patience for this verification, should such a stage ever arrive. In absence of empirical verification, however, it is possible to strengthen the case for causality by meeting some of the arguments against it. This method is at best an indirect one. I shall not discuss all the possible objections to causality. Such an attempt would mean practically the rewriting of the history of philosophy from Anaxagoras to Whitehead. I shall limit the discussion to two current arguments raised against causality. For convenience the first may be called the argument from history, and the second the argument from uniformities of natural laws as statistical.

1. *History.*—The general claim of the argument from history is that causal or scientific knowledge presents merely a description or abstraction, whereas historical or appreciative knowledge gives a concrete insight and understanding of reality. Causality is, at best, only a useful and practical scheme in dealing with experience. "The world of appreciation is the . . . deeper reality," writes Royce. "Its rival, the world of description, is the result of essentially human finite outlook."¹ Scientific description is necessary, but abstract and inadequate; but as it is "anybody's world" it gives unity to experience. To make our description valid for all human beings, the fashions of causal or scientific description have to be universal. We cannot describe, however, "the unique, e.g. Shelley's 'sense that at the winds of spring,' etc. That we have to appreciate."² For Ward, too, it is history not science or mechanism which can give us reality in its concreteness. "With the experience in the concrete, we can deal satisfactorily in no other way," writes Ward, "and no competent thinker dreams of interpreting the history of the world by means

¹ *The Spirit of Modern Philosophy*, p. 411.

² *Ibid.*, p. 308.

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of a scheme of universal laws."¹ In history "we find no mere repetition, no absolute fixity, small scope for measurement or for mathematics, the indispensables of all scientific *conception*; yet, though affording thus little foothold for positive and exact science, the historical is what we *understand best* and what concerns us most."²

The claim of the argument from history does not seem to me a well-founded doctrine. It may be granted that existing beings, animate and inanimate, are individuals, that they are concrete and unique. This belief, however, need not lead one to a sharp separation between the historic and the causal types of knowledge. All significant assertions about the individual or the concrete are in terms of universals and abstractions. No historical knowledge can possibly dispense with the disparaged abstractions. Take any historical event which is individual, unique, and unrepeatable, such as the invasion of Russia by Napoleon. Each incident and happening in this campaign, such as Napoleon's march through Poland, his encounter with Russians at Borodino, the setting on fire of Moscow by Russians before Napoleon's entrance, the enormous loss of men in the campaign, etc., is unique and unrepeatable. All these happenings, however, are described in terms of concepts and universals. Apart from universals, such as "encounter," "fire," "entrance," "loss," terms which are applicable to many other situations, the understanding of these unique events would be impossible. The proposition that reality is historic, individual, concrete should not be identified with the untenable doctrine that the individual is real apart from concepts or abstractions.

On the other hand, scientific knowledge, which is discredited because of its abstractions, does not dispense with the concrete or the individual. The aim of natural science is to understand the nature of the actual world, and not to construct the laws of all possible worlds. The geologist who is trying to determine and analyse the various stages of the evolution of the earth is dealing with something which is specific, unique, and individual. The incidents here are almost as unrepeatable as Napoleon's Russian campaign. In a more limited sense, the same is true with the physicist. The physicist in his laboratory experiments with individual objects. The fact that he is interested in laws, or causal connections, should not lead one to the belief that he has no concern with the individual or the concrete. The discovered laws are laws of specific realms of existence. It should also be noted that the historian, not unlike the scientist, is engaged in determining certain uniformities and laws of the human race. The acceptance or rejection of alleged facts, the weighing of evidence, is often determined in terms of these laws. In this respect

¹ *Naturalism and Agnosticism*, vol. II, p. 280.

² *Ibid.*, p. 280.

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the method of a critical historian is very similar to that of an exact scientist.¹

Yet one might agree on one point with Ward's and Royce's contention. It might be reasonably held that the same situation or object may be described from different points of view. Logicians have been long conversant with the peculiarities of the principles of classification, of which many are available for arranging objects of our experience. The smallest book in size in one's library may be the biggest in value. An object may exhibit different characteristics through its relation to different types of classification. To claim, as the materialists do, that existence should be classified only in terms of one *fundamentum divisionis*, namely, causality, shows, to say the least, a lack of metaphysical imagination. It is much more fruitful to assume the possibility of a number of principles of classification, and to determine in terms of empirical verification which are most relevant, fruitful, and enlightening in their application to experience. An object may be a model of causality, yet at the same time exhibit characteristics of purpose. In a situation like this there is no necessity to consider causality as appearance, or as merely practical. Causality is an objective aspect of existence, though existence may have other aspects.

2. *Uniformities as Statistical Averages.*—As a second objection to causality it is argued that the uniformities expressed in laws are only approximately exemplified, and never with rigid exactness. The relations between phenomena are constant in the sense that they hold within very narrow limits. We have no warrant, it is claimed, for saying that they are absolutely constant. The so-called uniformities of nature are only statistical averages. The actual course of events may conform to these uniformities within certain limits, but to claim absolute uniformity is to go beyond empirical knowledge.

The ground for the view that uniformities are of the statistical type is based first of all on the fact that the so-called rigid, causal relations are never verified in our experience. Taylor, for example, points out that "the undeviating conformity of the actual course of any concrete process to scientific law 'cannot be verified as an empirical fact by observation or experiment.'²" Similarly, Royce writes: "What we verify are more or less permanent rules relating to the routine of nature phenomena. In other words, our common experience discovers states, more or less persistent."³

Secondly, it is pointed out that the view that uniformities of nature are only statistical averages is strengthened by the consideration of the actual method of the scientists. In many cases,

¹ M. R. Cohen, *Reason and Nature*, pp. 12-15.

² *Elements of Metaphysics*, p. 223.

³ *The World and the Individual*, vol. ii, p. 186.

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if not in all, uniformities have been obtained by statistical method. The measurements of molecules are all made in bulk. What is really measured is "the combined effect of millions, or it may be of billions, of molecules."¹ As we cannot deal with individual atoms but only with the aggregate or bulk, the fluctuations, if very small, are considered as non-existent. The physicist, like the sociologist, is confined to the statistical method. The only difference between the two is that the former deals with less striking individuals.

It is interesting to observe that the doctrine that nature is relatively indetermined and that the uniformities of nature are only statistical, a view which would have been violently criticized by most of the physicists not many years ago, is a fashionable and popular doctrine since the recent developments of the quantum theory. Eddington, for example, writes: "It is a consequence of the advent of the quantum theory that *physics is no longer pledged to a scheme of deterministic law*."² Similar views are expressed by Weyl, Heisenberg, and Reichenbach, to mention but a few. One suspects that the willingness of the modern mind to accept the doctrine that nature is indetermined is not solely based on the consideration of facts, nor mainly on the traditional motives for making place for God, freedom, and immortality. Our age dislikes strict laws of all types. We dislike strict laws in government, in morality, and in aesthetics. Our emotional lives are chaotic for innumerable reasons: we love primitive dances, unintelligible poetry, bizarre paintings, noisy music, and vague concepts. It is not strange, therefore, that we should also carry the same attitude into our descriptions of nature. A chaotic and indeterminate nature would be in harmony with chaotic and indeterminate experience. I do not mention these considerations to discard the doctrine I am considering. I admit the possibility that nature may be relatively, or wholly if one likes, indeterminate and chaotic. I see no reason for the impossibility of the doctrine. It should be noted, however, that the claim that uniformities are ultimately statistical is not a verified fact, but rather a certain interpretation of certain accepted facts. The very same facts have a different possible interpretation.

That measurements and physical comparisons are never exact, that uniformities have been attained by statistical methods, and that the invariant relations have never been completely verified, are facts which one should admit readily; these facts, however, are explicable without the denial of causality. The inexactness of measurements and physical comparisons may be due not to any indeterminism in nature but to the lack of finer instruments or precise formulation of the physical problems; in short, to the lack

¹ Weyl *Naturalism and Agnosticism*, vol. i, p. 100.

² *The Nature of the Physical World*, p. 294.

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of knowledge. Even in the quantum theory, where, at the present stage of its development, the very nature of the problem demands the principle of indeterminacy, as the simultaneous determination of the momentum and of the position of the electrons are impossible, it should be noted that indeterminacy does not mean indeterminism in the sense of uncaused happening, but rather in the sense of immeasurability. As Turner points out, the implications of Heisenberg's principle of indeterminacy are often confused, owing to the ambiguity of the expression to "determine."¹ Determinism usually means "unvarying causation." In the principle of indeterminacy "to determine" means not "to cause," but simply "to ascertain."

There is no conflict whatsoever between causality and the use of the statistical method. In physics, for example, the statistical method was first developed to deal with problems related to microscopic entities. Although molecules may be causally determined, recourse is made to the statistical method because of the crudity of our senses and the complexity of mathematical problems. Similarly, in meteorology and in social sciences complexities demand the use of the statistical method. Here again one need not forgo causality. Though the traits of the group are described by statistical laws, variations may have specific causal connections, and one may gradually ascertain these connections.

Theoretically we must admit the possibility that the ultimate laws of nature may be statistical. Causality, however, is equally compatible with the given facts, and pragmatically preferable. If statistical laws are ultimate, there is then no theoretical reason to find the causes of variation; but progress has been attained by looking for the causal connection of these variations.

¹ Turner, E., "Determinism," *Nature*, December 27, 1930, p. 995.

THE CATEGORICAL IMPERATIVE AND THE GOLDEN RULE

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Is the assimilation of these two formulations of the moral principle by Kant and some of his expositors justified?

In the *Analytic of Pure Practical Reason* Kant claims that his view of morality agrees with the ancient command that man should love his neighbour as himself. Also in the *Fundamental Principles of the Metaphysic of Morals* he regards the Golden Rule as a deduction, though with several limitations, from the second version of the Categorical Imperative.

Abbott in his *Memoir of Kant* (*Kant's Theory of Ethics*, p. lii) assimilates to the Categorical Imperative both the Golden Rule and Clarke's principle of Equity. William Wallace in his small book on Kant does the same. Henry Sidgwick is very definite on the matter. After quoting Clarke's Rule of Equity ("Whatever I judge reasonable or unreasonable that another should do for me, that by the same judgment I declare reasonable or unreasonable that I should in the like case do for him"), he observes that it is the Golden Rule precisely stated, and adds that it appears to him to coincide to a considerable extent with Kant's fundamental principle of duty. Sidgwick's own formulation of the Rule of Equity is as follows: "If, therefore, I judge any action to be right for myself I implicitly judge it to be right for any other person whose nature and circumstances do not differ from my own in some important respects." He arrives at the truth of this by considering the relation of the integrant part to a whole and to each other, and finding it thereby self-evident that the good of any one individual is of no more importance from the point of view of the universe than the good of any other. This seems to mean that difference of persons makes no difference to the reasonableness of any action that may be pronounced right in a definite set of circumstances.

We contend that there does exist after all a difference of meaning in the three formulations of the moral principle just mentioned. The Categorical Imperative seems to us to be *uni-personal*; the Rule of Equity appears to be *extra-personal* in the sense that the personal factor can be disregarded in judging what is reasonable in action; the Golden Rule, on the other hand, seems to be essentially *inter-personal*.

At this time of day further discussion of the Categorical Impera-

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tive is apt to be wearisome; it might be thought that there existed general agreement as to its meaning. And yet as recently as last year (1932) Professor Field felt it necessary to give Kant's first statement of the Imperative a serious re-examination in the pages of *Mind*. Field agrees that in that statement Kant is saying not merely that if I think that I ought to do any action, I must also believe that anyone else ought to do the same action in the same circumstances; but is implying in addition that I definitely *will* that other people should act similarly in similar circumstances. This interpretation does not seem to us to mean more than that I wish that everyone else should be moral in the Kantian sense. The existence of other people does not seem to be essential to my own morality in any other way.

We ourselves take the first version of the Categorical Imperative to mean no more than that, if I can conceive my action universalized without contradiction, then the action is right. Morality depends upon a certain ability to will, i.e. to will without contradiction: what is universalizable is right. If this interpretation is correct, how exactly on this view is my morality related to other persons? The reference to other persons, we submit, is only indirect and instrumental in order to find out what is duty for myself. Consider Kant's own illustration—that of promise-breaking. Promise-breaking is wrong, according to him, not because of any disrespect, or lack of regard, or love, for other people, but because such a practice could not be universalized. Universal promise-breaking would, as a matter of fact, be impossible, not because of any contradiction of a logical kind, but because, human nature being what it is, an inevitable reaction would take place: faith in all promises being lost, promises would not be made. Now it is true that other people are in the picture all the time, but they supply nothing more than a background, and otherwise are not needed. Other people are even less conspicuously in the picture when Kant illustrates his position by the immorality of suicide. For the wrong of suicide, according to him, has nothing to do with the selfish disregard of the claims which others have on a man's life and service, but arises out of a kind of contradiction, viz. the contradiction of using the impulse which should secure the preservation of life for the purpose of its destruction. Again, the reason why it is wrong not to help others in their need is merely that we should by such conduct land ourselves in inconsistency when we required and called for help for ourselves. Here again wrong seems to rest upon a species of contradiction, the attitude to other persons being a subordinate consideration. Kantian morality is really uni-personal.

It might be thought that in the second version of the Categorical Imperative the social reference is direct and essential, inasmuch as

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the formula runs: "So act as to treat humanity, whether in thine own person or in that of another, in any case as an end withal, never as a means only." Here, of course, the individual is definitely regarded as being in some relation to others: we are called upon to treat other persons as "ends." It will, however, be noted that Kant regards the individual as an end "*in himself*." "Rational beings," he says, "are called persons, because their very nature points them out as ends in themselves." . . . "Every (other) rational being regards its existence similarly." Surely the point of view is monadistic, and the type of morality uni-personal. Consider Kant's instances of breaches of the maxim. Suicide is wrong because the suicide, who should regard himself as an end in himself, uses himself as a means—as a thing. But, says Kant, "a man is not a thing, that is to say, something which can be used merely as means, but must in all his actions be always considered as an end in himself." The wrong of promise-breaking is declared to consist in using another man as a means, and failing to treat him also as an end in himself. Here the point of view does seem to be inter-personal rather than uni-personal. But it is scarcely *positively* inter-personal. There is inculcated the sound negative principle that we must avoid using other people merely as means. But the implication is that the positive task of realizing one's rational nature as an end is each man's own affair. The single self can be as truly moral as the self in association with other selves.

The third formula of the Categorical Imperative runs: "Act as a member of a Kingdom of Ends." By "kingdom," said Kant, "I understand the union of different rational beings in a system by common laws, i.e. a kingdom which may be called a kingdom of ends, since what these laws have in view is just the relation of these beings to one another as end and means." Here, again, it seems as though Kant had advanced beyond the uni-personal view of morality, inasmuch as he conceives of a social community of individuals each of whom is reciprocally end and means to the others. We find, however, that this system of selves is such only because of having common laws. There is no suggestion that selves are united in any sense other than that they are alike subject to the same idea of duty. Kant still regards the self monadistically, able to attain ethical perfection by itself. In the words of Edward Caird, "Kant implies that each individual, as a moral or rational being, is alone with himself, and that it is only through his sensuous or outward life that he comes into contact with others. . . . In spite of his idea of a kingdom of ends, reverence before the abstract law is still treated as the essential and necessary form of the moral standard."

In the *Critique of Practical Reason* there is at least one clear statement which definitely excludes from the nature of morality

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any interpersonal regard or devotion. For Kant there declares that other persons are never in any case an object for our "respect." The object of "respect" or reverence is not, strictly speaking, another person, even though the situation may be a social one, but rather the "law" which the example of another person exhibits. Some might say that such a view of morality is not even uni-personal, but extra-personal, inasmuch as other persons possess only instrumental value as exhibitors of something considered in abstraction from themselves.

When Kant likens his own view of morality to the Jewish and Christian principle of love to one's neighbour, it turns out that what he means by love is "practical love," which, he adds, is "liking to practise all duties" towards the neighbour. But since Kant regards "liking" as suspect on the ground that inclination is tainted with hedonism, and therefore heteronomous, the love of our neighbour from the Kantian point of view reduces down to the practice of social duty, not from any regard for our neighbour as such, but from reverence or respect for the Moral Law. In the Preface to the *Meta-physical Elements of Ethics* Kant makes it clear that he has no other conception of love than that of a merely emotional or sentimental type, called by him "pathological." He definitely states that it cannot be a matter of will or volition.

Here we may interpolate a few words about Clarke's Rule of Equity, which according to Sidgwick is obtained by considering the similarity of the individuals that make up a Whole. The standpoint, we suggested, is really *extra-personal* in view of the fact that acts are considered apart from agents, and situations in abstraction from persons. The Rule of Equity appears to mean no more than that similar situations require similar acts. Indeed Clarke's whole attitude to moral questions was mathematical, or quasi-mathematical, as the following quotation from his works makes clear: "All wilful wickedness and perversion of right is the very same Insolence and Absurdity in Moral matters, as it would be in natural things for a man to pretend to alter the certain proportions of numbers, to take away the demonstrable relations and properties of mathematical figures." According to Clarke, individuals are merely so many units in a whole, who, because of their similarity as units, should practise similarity of behaviour in similar cases. On such a view morality is not a question of the direct attitude of one person to another; it is rather a quasi-mathematical problem.

When we pass to the Golden Rule we go beyond this extra-personal and abstract standpoint; we transcend even uni-personal morality; we definitely arrive at an inter-personal formula. The Golden Rule is, of course, a far more ancient formulation of moral principle than that attained by any ethical theorist. Indeed, it is

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widespread as well as ancient, being found in Zoroastrianism, Confucianism, Hinduism, Buddhism, Judaism, Hellenism, and in Christianity. A formulation so widespread, and so ancient, demands serious respect from the theorist in morals. Any theory of conduct that runs counter to its implications assumes a great responsibility, and risks being unreal.

The Golden Rule implies more than an equality of consideration as between one individual and another; it makes the direct attitude of individuals to one another central and essential. It does not say merely that what is reasonable for one man to do to another is reasonable for any other man in the same circumstances. It does not primarily teach impartiality of judgment on acts considered in abstraction from the agents; rather does it inculcate impartiality of regard between the agents themselves. So long as we use the ideas of similarity and equality which pertain to the maxim of Equity, we relate acts and situations rather than persons. The Golden Rule relates to persons, and involves the idea of unity. Clarke's Rule of Equity could, we think, be applied by persons whose attitude to each other was one of indifference, or even animosity. All it requires is equality of treatment; whereas the Golden Rule implies community of interest, and teaches impartiality of regard.

The logic of the Golden Rule was appreciated by the ancient seers and prophets. Confucius interpreted it as reciprocity. A successor of his drew out the full implication about two hundred years later. Mo Tzu, as he was called (born about 468 B.C.), traced all evil to the one root of selfishness. The following is an extract from his principal treatise entitled, *The Love of All*:

"The source of disorder in a State lies in the lack of mutual love. . . . A thief loves his own family, but because he has not a similar love for the families of others, he proceeds to steal from their homes to add to his own. . . . Rulers of States love their own territory, but having no love for other States, they proceed to attack them in order to increase their own possessions. What is the remedy for this state of things? . . . If we were to regard the property of others as we regard our own, who should steal? If we were to have the same regard for the territory and people of another State as we have for our own, who would conduct aggressive warfare? . . . If we were to have the same regard for others as we have for ourselves, who would do anyone an injustice?"

That the real meaning of Mo Tzu's teaching was understood by his contemporaries may be guessed from the remark of one who reacted against its idealism in these words: "Excellent Sir, your theory is sublime, but it is impracticable"!

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According to Mo Tzu the problem of conduct is essentially interpersonal, not merely in the sense that others are inevitably affected by our actions, but in the sense that the aim of morality is the unification of the wills of men. At an earlier date than that of Mo Tzu, advanced thought in Judaism had arrived at the idea of duty or righteousness as meaning the love of self and neighbour, albeit the term "neighbour" was for a long time limited to fellow-Jew, or resident alien. Jesus, in summarizing the teaching of the Law and the Prophets enunciated the Golden Rule in its then traditional form, and also the principle of love to our neighbour. So the presumption is that to Him these were not opposed or contradictory, but virtually equivalent.

The Golden Rule has met with plenty of criticism-- some of it too subtle to be convincing. Kant observes that many a one would gladly consent that others should not benefit him, provided only that he might be excused from showing benevolence to *them*. It is a question whether we could really "will" such independence, which in any case is quite impossible as a matter of fact. If, again, it be said that a criminal might use the Golden Rule to argue against the judge who punishes him, the reply would be that such a use of the Rule would be naïvely literalistic. The Rule does not teach that, as between two persons there must be similarity in the details of behaviour, but rather impartiality of interest; from that point of view the criminal must endorse the verdict of the judge, as the judge must expect and approve the same verdict were he the criminal.

A common form of criticism of the Golden Rule is that it permits reciprocity in evil. Kant instances the example of a married couple bent on ruin, with the comment: "O marvellous harmony, what he wishes, she wishes also"! There is also the familiar illustration of fellowship among a band of thieves. "If," says Mr. Carritt, "we are to take seriously the contention that it is coherence which makes acts right, surely it must be actual coherence with actual desires and wills of actual people-- even conformity with the ways of mankind, including among mankind the most barbarous tribes and races."

In our view the Golden Rule does teach a doctrine of coherence; it implies, to use T. H. Green's language, "a will of all which is the will of each." But it precludes a merely sectional coherence between a few, which, because it is sectional, is no more than an example of co-operative egoism, such as we can see in a selfish family, in a band of thieves, in an aggressive nation, or empire.

If we use the idea of coherence with which Professor H. J. Paton has made us so familiar, then we should maintain that the coherence inculcated by the Golden Rule is:

(1) Not sectional, but *universal* in its range. We are to do, not simply to a few selected individuals just the particular things we

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wish them to do to us, but we are to do unto man as man what we would have any and every man do to us. In other words, it must be coherence with humanity as a whole which must inform and inspire every human attachment of narrower range.

(2) In the next place, the coherence implied by the Golden Rule is scarcely coherence with the "*wills*" of men. "*Wills*" suggests actuality and concretion; it implies the historic rather than the ideal aspect of volition. He indeed would be an optimist who looked to find morality in every phase and institution of social life. The quality of the sociality behind social institutions varies greatly from the ethical point of view. Some of it is largely of the instinctive type; some of it rises no higher than is necessary to realize the aim of mutual convenience. The object of coherence is more than the "*wills*" of other men; that is too abstract a conception. If we substitute the term "*love*" for that of "*coherence*," it will be at once realized that we cannot love a "*will*." Strictly speaking, we can love only *persons*. And to "*love*" a person is far more than to agree with his volition; it is to achieve a fundamental unity of life which may be quite compatible with disagreement with actual volition.

(3) Finally, the Categorical Imperative and the Golden Rule differ in regard to the nature of their dependence on Religion. The former is an autonomous principle; it is a law of reason which we impose on ourselves. "All moral conceptions," Kant tells us, "have their seat and origin completely *a priori* in the reason." Religion is thus far not essential as a basis for morality. Kant does introduce the idea of God, but only as a postulate for the purpose of making his theory complete. And "if there is no more profound and ultimate reason for my reverence for the good will than that it is my own will, does not absolute reverence for the good will and its law of duty degenerate into self-worship?" (A. E. Taylor: *The Faith of a Moralist*, i, p. 152). Now the Golden Rule, in its Christian setting and Jewish tradition (not to speak of other Faiths), relates the love of self and neighbour to the supreme love of God. Conduct and worship merge. To speak in terms of coherence, our coherence with each other is mediated by our coherence with the Whole regarded as Conscious, Intelligent, Personal, and Loving. Few would deny that the Universe is in some way a coherent Whole which maintains itself from moment to moment. Included in this Whole are the millions of rational beings whose own maintenance from moment to moment depends upon their connection with the Whole. Within this Whole they are able to introduce the kind of incoherence which we call evil, which, however, does not mean incoherence in the realm of fact. Evil is quite coherent with the Whole conceived as mere Matter or Energy. But if there are reasons for thinking that the Whole is the expression of Mind, if further this Mind is integrative in purpose and trend,

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then so far as rational creatures can do so, they should themselves, in harmony with the Universe so understood, integrate their own lives with each other and with the Whole. If this seems like circular reasoning, if we are interpreting the Whole as Love in analogy with human experience of integration, and then resting the obligation of human love on the nature of the Whole conceived as loving, such circularity of thought is but the movement of faith. Deep calleth unto deep. The Divine without us and the divine within us act and react the one on the other.

THE HEGELIAN ABSOLUTE AND THE INDIVIDUAL

P. T. RAJU, M.A.

THE aim of this paper is not to enter into a detailed discussion of the nature of the Absolute and the Individual, but to show that on the Hegelian conception of the Absolute the individual self is not saved. Hegel is fond of reiterating that his Absolute is not a bare one, but a one in many, an organic whole, a perfect and harmonious system of an infinite number of individual selves. The individual, as in Spinoza and Schelling, does not lose itself in the Absolute. The latter is not a lion's den into which all animals enter but from which none returns, not a mere darkness in which all cows are black, but a system of different individuals.

To say that the individual self is preserved in the Absolute is more an arbitrary dictum than a reasoned conclusion. From the fact that every existent thing is an identity in difference, we cannot argue that the Absolute too is so. Our world is a bundle of contradictions, but the Absolute is not such a bundle. Even one of the earliest Greek philosophers, Anaxagoras, arrived at the conclusion that his *oiomerac*, or the original particles, contained something of everything in themselves. If his solution is too physical, Hegel's is too logical. And if life is more than logic, the Absolute must be certainly much more.

It is still a controversial point whether Hegel held the view of personal immortality. Some like McTaggart believe that he did, but others do not. Says Stace: "It is a matter of dispute whether Hegel believed in immortality in the *literal* sense. I have only space here to indicate, without reasons, my own opinion, which is that he did not take it literally, but regarded it as a *Vorstellung* for the infinitude of spirit and the absolute value of spiritual individuality. Immortality is a present quality of the spirit, not a future fact or event."¹ Lord Haldane holds the same view. Dr. Haldar, too, expresses a similar opinion, though not exactly the same, in his *Philosophical Essays*.²

On one of his principles, it is true that Hegel could not have held the view of personal immortality. Dr. Haldar points out that, according to Hegel, the relation of body and mind is very intimate. One implies the other. So, when the body is destroyed, it inevitably

¹ *The Philosophy of Hegel*, p. 514.

² The chapter on "Hegelianism and Immortality."

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follows that the mind ceases to exist. If so, how is the individual self preserved in the Absolute? Are we to be nothing after the continuous warfare of a whole life? Is our destruction a mere dissipation into elements to be reorganized by the Absolute into a new whole? Immortality cannot be a mere *Vorstellung* for the infinitude of spirit. It is absurd to contend that the spirit which is eternal will cease to exist after the death of the body.

Yet, on another of his principles, Hegel cannot deny personal immortality, though, unlike Rāmānuja, he is not explicit on the point. Western philosophers do not make any distinction between mind and self. And, according to Hegel, mind, as it is here, is a product of illusion or *Tauschung*. The final end is eternally attained in the Absolute; all our strife is due to illusion; mind is actually in strife here; hence mind as it appears here is due to illusion, and must have another aspect, which is perfect. From the absolute point of view mind is eternally liberated. So when mind realizes this state, it becomes immortal.

But even then it is impossible to retain the individual self in the Absolute. The latter, or Īśwara, as it is called by Rāmānuja, is an organism. The innumerable selves are its members. But then, in the liberated state, how are we to distinguish one jīva from another? We can find no differentia. The paradox of relations, which Bradley raises, is not new to Indian philosophy. Sankara raises the same difficulty. And in the Absolute no contradiction can be left unsolved.

Here it may be objected that, when Hegel asserted that he has saved the individual, he means that the self, which is regarded as unreal by Sankara and others, is really the individual. Even then his position is not tenable. Besides the paradox of relations, and the objection that the striving self, according to Hegel, must be an illusion, there are many difficulties in his view. The theory of internal relations is a corollary of the organic conception. In a system any act of one member necessarily affects others. Its relations to the other members are constitutive, and therefore internal. As Bradley says, even spatial and temporal relations have to be regarded as internal. If an individual changes his place, there arises a change in his very nature, though imperceptible to our finite view. Thus individuality becomes only "a matter of content." The individuals "are only pipes through which the Absolute pours itself, jets, as it were, of one fountain." Each of them is only a "conflux of universals or qualities," mere adjectives of the Absolute. But then we cannot see how the individual is saved.

We can now understand why Bosanquet is forced to the conclusion that in the Absolute there is a blending of the individual selves, or, in Bradley's phrase, an "all-pervasive transference." The contents and qualities of the different selves are, as it were, shaken up together

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and neutralized and supplement one another. But as the end is already attained in the Absolute on Hegel's view, the individuality of the individual must be a mere illusion, for the contents of the different individuals are already shaken up together and neutralized. The conclusion is necessarily implied in the premise that the Absolute is an organic whole.

Royce seems to have striven very hard to save the individual. Individuality is not merely a "matter of content," but has some uniqueness in it. It is impenetrable. It is not a conflux or system of universals only. If otherwise interpreted, it loses its very nature. Royce lays emphasis upon its uniqueness and indescribability in other terms. Thus far he seems to be very near the truth. But when he falls back upon the Hegelian conception of organism, and says that the individual, as a unique purpose, forms a member of a system of such purposes, he loses the ground he has gained. To be a member of a system means to be interpretable in terms of others. Though in society some of our actions can be interpreted thus, our ultimate nature cannot be. Royce thinks that the Absolute too is a purpose, though a system of our finite purposes and in realizing our aims we are realizing the Absolute aim. But as Aliotta pertinently remarks, if what seems our aim is the aim of the Absolute, it cannot be truly ours, and *vice versa*. If the individual is preserved, the Absolute is lost; and if the Absolute is preserved, the individual is lost. The conclusion is inevitable.

Pringle-Pattison, in criticizing Bradley and Bosanquet, says that the individual should be a substance in the Aristotelian sense, though not in the Spinozistic.¹ But if Pringle-Pattison remains a Hegelian, we do not understand what advantage can be gained by making the individual a substance even in the Aristotelian sense. Though we can attach predicate after predicate to it, its ultimate nature remains only a matter of content. Being a member of an organic whole, it is through and through pierced by others. That is why Bradley says that even spatial and temporal changes produce corresponding changes in the individual's nature. Bradley and Bosanquet make the Absolute the ultimate subject of every predicate, though they have no objection in keeping the individual as a proximate subject. According to them, the Absolute is the only real individual, and from the metaphysical point of view, we, as finite centres of experience, are its adjectives. And they are justified in their conclusions.

To avoid the above consequences, philosophers like McTaggart assert the ultimate and metaphysical substantiality of the individual. It is "a substance existing in its own right." Says McTaggart, "if the opponent should remind me of the notorious imperfections in the

¹ *The Idea of God*, pp. 270-1.

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present lives of each of us, I should point out that every self is in reality eternal, and that its true qualities are only seen in so far as it is considered as eternal. *Sub specie aeternitatis* every self is perfect. *Sub specie temporis*, it is progressing towards a perfection as yet unattained."¹ But as a Hegelian, McTaggart cannot dispense with the organic conception. The Absolute is the unity of the selves, and the unity is not external to them. "The unity must be completely in each individual, yet it must also be the bond which unites them. But to attain such a unity the selves must be internally related to each other. It is not enough to say that all the selves form a complete whole. There must be something in the constitution of each self to be a member of a perfect system. Even pre-established harmony, as in Leibnitz, cannot explain the fact. The nature of the individual must be able to provide for such a harmony. The theory of internal relations is therefore indispensable. The result will be that no individual can exist in its own right. We cannot have both a plurality of self-dependent substances and an essential unity between them.

Besides, if there is an individual who can exist and act in his own right, there must be scope for possibilities in the universe. They must be due to the freedom of the individual. But Bradley is forced by the logic of his position to remove the difference between the possible and the actual. In the metaphysical sense, the possible and the actual are the same. "Chance is the given fact which falls outside of some given whole or system."² But actually there is nothing which can fall outside the harmonious system of the Absolute. Hence there is no chance. The conclusion strictly follows from the Hegelian view which cannot allow the individual the freedom even to err. Joachim in his *Nature of Truth* tacitly admits the charge. To call freedom self-determination in no way strengthens the position.

The Hegelians are obsessed by the principle *ex nihilo nihil fit*. Any action proceeding from an individual must have a cause. In order to save his freedom, the cause is regarded not as external to him, but as his very nature. Yet his nature is formed by the externality, the rest of the universe. In it lies the final explanation of his actions. Freedom is freedom of self-determination, but the self is determined by the not-self. So all that issues from the individual is already there in the rest of the world. Whatever be the causes that led the ancient philosophers to formulate the principle *ex nihilo nihil fit*, it is called in question recently. Even realists like Russell disbelieve in it. In Indian philosophy, Sankara too questioned its validity. Satkāryavāda, according to him, is not valid in the metaphysical sense. And his followers cite as an instance the ordinary fact that out of coddling scorpions are born. Whether we accept the

¹ *Mind*, N.S., Vol. XI, p. 388.

² *Appearance and Reality*, p. 388.

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principle at the empirical level or not, it should not be applied in determining the nature of the individual, and must be considered invalid for the purpose.

Let us now examine Sankara's theory. We have seen that the chief condition of individuality is some unique indivisibility. Sankara's conception of *jīva* satisfies this condition in one way. On the principle of *māyā*, Sankara need not hold the theory of internal relations. They do not constitute the individual's nature. When one *jīva* is affected in one way, there is no corresponding change in others. Though his lower Brahman can be more or less compared to Rāmānuja's *Īswara* or Hegel's Absolute, Sankara asserts that the admission of its existence is only a compromise to some people's demand that philosophy should satisfy our religious instinct. In criticizing the Sāṅkhya conception of the oneness of *Prakṛti* on the ground that when one *puruṣa* (self) is liberated, all the rest also should be, the Sankarites point out that their *māyā* can be many.¹ On one's own *avidyā* ceasing to exist, those of the rest need not. *Māyā* can be one with regard to *Īswara*, and many for the *jīvas*. So far every *jīva* may be unique. It does not lose the quality in spite of the *vāsanās* and *samskāras* which are gathered through the round of deaths and births and enter into its nature.

Yet Sankara would say that our analysis is not complete. Though what is contributed by *māyā* for the *jīva* is unique, its contribution forms only a part of *jīva*'s nature. The *jīva* owes its consciousness to Brahman. Ultimately both are identical. Brahman is the highest universal. Without it the *jīva* could not have the sense of "I." So, as regards its conscious nature, it is not unique. Hence, on Sankara's view, the *jīva*, though unique phenomenally, is not so noumenally. There is no personal immortality, but only impersonal. Immortality for the *jīva* means realizing its own identity with Brahman, and thus losing its own personality.

Sankara's conception of Brahman satisfies our condition of individuality to the full. In the sense of being one among many, his Brahman is not an individual. But we have seen above in examining the view of McTaggart that a one among many cannot be an individual if the many are to be essentially interrelated. Bradley says that a plurality of reals is not possible, for each would be disturbed by the external influences which would create internal discrepancy, and, again, a plurality of reals cannot be reconciled with their independence. But it is obvious that the assertion holds good only when essential interconnection between the reals is posited. To put Bradley's view more concretely, an essential relation is constitutive, and thus each real can be explained in terms of others, and is determined by them. Each loses its uniqueness and becomes

* Saravadarsana Samgraha.

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merely a form in which any content may be packed. But if the reals are not thus related, if the relations of each to others are external, they do not form members of a system, and each becomes independent. The external influences cannot create internal discrepancies, and a plurality of reals cannot be inconsistent with their independence. Pluralists with a realistic bent of mind hold exactly such a view. But here we are not concerned with them, but with the idealists of the Hegelian type.

Nor is Sankara's Brahman an individual in the Bradleyan sense. It is true that Bradley and Bosanquet are more logical and advanced than the other Hegelians. They have shown that the individual selves as members of an organism cannot retain their uniqueness. The individuals somehow transform each other, blend with each other, and form the Absolute which is the real individual. Thus they are lost in it.

A few steps can easily lead us from Bradley to Sankara. According to the former, the many as such are lost in the Absolute. They all blend and together form the ONE. If so, they cannot remain there as many. They lose their many-ness or bahutva in it. Strictly speaking, the Sankarites assert that the Absolute cannot be said to be the ONE. If many-ness disappears in the Absolute, one-ness also goes with it. They are categories of thought, but the Absolute is above thought, or, in Bradley's terms, more than thought. If thought as such disappears in the Absolute, the categories cannot exist. Hence, Brahman is regarded as indescribable, anirvachanīya. Bradley says that it is inexplicable how the appearances blend in the Absolute, and how they issue forth from it. It is this principle of inexplicability that Sankara calls māyā.

In this connection Bradley seems to occupy a position between Rāmānuja and Sankara, and is thus a little in advance of the former. It is true that what he rejected as appearances he reclaimed as forming part of reality. Also, his Absolute, like Rāmānuja's, is a one in many, an organic whole. The finite centres of experience or the jīvas are the adjectives of the Absolute in both. But Bradley seems to have recognized and to have been more impressed by the self-contradictory nature of our finite existence than Rāmānuja. The former points out that the finite selves are riddled with contradictions, and hence cannot exist as such in the Absolute. They must blend and undergo complete transformation. But in Rāmānuja there is no such conception. Had Bradley given up his Hegelian bias, rejected the appearances as in no way forming part of reality, and thus saved the eternal perfection of the Absolute, he would have joined hands with Sankara. Says Professor Radhakrishnan, "At the centre of Sankara's system is the eternal mystery of creation, a mystery in which every movement of life and every atom of the

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world are implicated.”¹ Bradley’s philosophy also has this mystery in its “somehow,” by which the appearances issue forth from the Absolute. But the mystery loses its force by his reclaiming the appearances as belonging to reality. It is only unwillingly, as it were, that he admits the impotency of thought to grapple with the mystery of creation and atonement. And the admission, therefore, remains a conspicuous inconsistency with the rest of his system.

The crux of all monism, says Professor Radhakrishnan, is the relation of the finite to the infinite.² And Sankara seems to be the most successful in defining the relation. He has saved the individuality of the finite self both in its phenomenal and noumenal aspects. It is sufficiently unique in both. Phenomenally the individual self is *māyā*. But *māyā* can be many for the *jīvas*. On the liberation of any *jīva*, its own *māyā* vanishes. Hence each *jīva* is unique so far. Noumenally, every *jīva* is the Brahman which is without a second. So it is also unique, and thus an individual, though much more. Sankara has also overcome the difficulty—which McTaggart could not—of bringing the different selves existing in their own right into essential unity. Both make a distinction between the eternal and temporal aspects. But Sankara makes all the selves identical, *sub specie aeternitatis*, and many *sub specie temporis*. *Māyā* permits them as much individuality as is necessary, and in no way impairs it in uniting them. In their eternal aspect the *jīvas* are one, and the problem of uniting them does not arise for Sankara at all.

¹ *Indian Philosophy*, Vol. II, p. 656.

² *Ibid.*, p. 715.

PHILOSOPHICAL SURVEY

PHILOSOPHY IN FRANCE

M. LE ROY ON INTUITIVE THOUGHT

IN his two volumes on *Intuitive Thought*¹ Professor Edouard Le Roy continues his idealistic interpretation of spiritual creativity, and turns from its 'products' manifested in biological and human evolution² to consider its most intimate character, as it is 'lived through' or directly experienced in intuitive and inventive thinking. The whole plan and its execution are determined by two characteristic themes of Bergsonism—intuition and the dynamical schema—though these are *repensés* in a quite original way. "Intuitive thought" and "metaphysical thought," M. Le Roy affirms in the preface, are "one and the same"; the latter is condemned only by those who misconceive the former. So by correcting misunderstandings he seeks to vindicate the method of intuition which Bergson advocated, and begins by attempting to elicit what is distinctive in philosophy. Its scope and character cannot be indicated with the same ease and sufficiency as those of any positive science. Once a field of objects, or a "subject-matter" is assigned, the construction of its science develops by procedures which involve abstracting from, and partitioning of, that field. Discovery of a new entity or adoption of a new point of view towards entities already known is sufficient to determine straightway a new science; the existence of the entity or the fruitfulness of the point of view entailing the legitimacy of that science. But what is most valuable and distinctive in philosophy cannot be conveyed in a similar way, by assigning some separate field of data. Its very history shows that there can be philosophy of any object whatever; any material admits of being studied philosophically. What is specific to the discipline, then, is a certain attitude or intent—"une disposition de l'âme"—which is "primarily a certain way of perceiving and thinking," hence, a "spirit" rather than a special content or 'private preserve.' The word properly denotes an activity or exercise, and not a structure of co-ordinated propositions. All philosophical thinking, no matter about what object, is "absolute thinking"; thinking not from this or that perspective, nor towards one or another restricted end, but thinking "dans une perspective d'unification intégrale." The single and vast problem confronting the philosopher, taken up by no special scientist, is "résorber la nature et l'histoire dans un éclair de conscience qui soit indivisiblement une vision et un acte." No one of the characterizations usually proposed adequately determines the nature of philosophical activity. To be sure, the philosopher is he who contends continually against imprisonment in any sort of prejudice; one who, in seeking simply to know, thereby liberates himself from every concern other than that of attaining full and certain knowledge, and one who aspires after a synthesis so synoptic and extensive that nothing of the wealth of thought and experience is sacrificed

¹ EDOUARD LE ROY, *La Pensée intuitive: I—Au delà du Discours* (pp. 204; Fr. 15); *II—Invention et Vérification* (pp. 296; Fr. 20), both in the collection "Bibliothèque de la Revue des Cours et Conférences." Paris: Boivin.

² Cf. "M. Le Roy's Interpretation of Evolution," *Philosophy*, IX, 33, January 1934, pp. 89-93.

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or compromised. He is, moreover, one in whom reason has become, as with the ancients, "*habitude souveraine et vertu efficace*," and one who is particularly sensitive to spiritual realities and values. All three characteristics are indispensable to designate the peculiar nature of philosophic exercise, for its practice is a threefold effort of criticism, speculation, and wisdom.

Science furnishes materials for the assay of knowledge, the "ballast for speculation," for it is the data and findings of the natural and social sciences which nourish and sustain philosophy. But science, reciprocally, has need of philosophy, if it is to understand itself as being the "work of the mind" that it is. So, though the sciences give philosophy "weight and substance," it is through philosophy alone that science can liberate and illuminate. One intrinsic limitation of science, however, lies in its inability to pass beyond the confines of organized and transformed experience, effected in accordance with the utilitarian needs of common sense. For, though widening the range of normal perception, science exaggerates its precision and acuity. All-absorbed in its objects, it ignores the contributions made by the interpreting subject. It ignores, too, that 'parcelling out' (*morceilage*) of experience which really derives from the analytic and abstracting character of our understanding, and errs precisely in taking this *parcelled* experience as the *given*, and as therefore both a material and a model for its operations. Science receives and utilizes, ready-made and without antecedent criticism, certain postulates or forms into which it forces experience in its effort to interpret it—thus remaining inescapably 'relative,' but without taking account of the fact. Thinking as restricted at the common-sense and scientific levels is incapable of grasping change in its very essence, "*dans sa mobilité même*"; its rôle is the auxiliary one of contributing to satisfy the demands of action and discursive reasoning, and it is in consequence more concerned with *states* than *transitions*—with that which is comparatively definite, stable, and suitable for utilization in discursive and industrial interests (thing, product, or effect) than with attaining a direct perception of the existent in its "immediate purity," freed from all "relativity" to perspective and situation, or to symbolic translation or utilitarian purpose. This "immediacy" we can never attain by thinking organized and limited as it is at the ordinary and scientific stages of cognitive evolution. Though the positive sciences (which are at an extension and refinement of common sense) do, indeed, aspire to theoretical disinterestedness, they must nevertheless remain, from their very procedure—by piecemeal revision, approximation, and partial self-correction—tributary to the anterior methods and habits of common sense. In sum, then, although it increases in precision and extent, correcting errors inherent in our perception and inference, science only succeeds in substituting for the "*morceilage commun*" another, more subtle and souple "*morceilage*," though no less infected with its own special 'relativity.' A critical revision of scientific results is therefore imperative. It must be a revision or substitution which shall correct the inherent tendency of science to immobilize and reify reality in its primitive fluidity, and, in order to disengage its "authentic essence," will institute what Bergson called "*une recherche d'immédiat*." In this search, no direct use can be made of the symbolism and devices found indispensable in action and discourse, and in this sense, intuitive thought which attains immediacy will be thinking "*au delà du discours*." Intuition alone can give "complete satisfaction to all the legitimate requirements of reason." It was Kant's erroneous assumption that in order to come by knowledge of ultimate reality a faculty independent of sensation and thought was required, and, failing to find such faculty, falsely inferred that no disclosure of ultimate reality was possible to minds constituted as ours. M. Le Roy maintains

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against this that perception can attain to ultimate reality, and that this conclusion is free from the objections to which Kant's is exposed, precisely because Bergsonian intuition is not independent but emphatically dependent on sensation, and is immanent in the very conceptual nature of our discursive thinking. "*Pensée vivante*" is essentially "history" or becoming, dynamically continuous—"an uninterrupted growth of vital maturation"—and no mere conjunction of images and concepts. Consequently it is not these into which it can be analysed without remainder; for in so resolving it what is essentially the thinking will escape us. To characterize this process from which images and concepts flow—"la réalité vécue"—M. Le Roy introduces the dynamic schema, which is in fact "*idée en marche*." The notion is a difficult one and is elucidated by reference to William James's distinction¹ between "substantive parts" and "transitive parts" in the stream of thought. In a flow of actual thinking, the images, the concepts and their verbal expressions, which we retain, dwell attentively upon and abstract, are merely stopping stages ("*stations conceptuelles*," "*époques d'arrêt*") which we habitually mistake or substitute for real thinking activity. To conceive it so is to misrepresent it. For in attending to a set of interconnected concepts, we are no more attending to *thinking*, than in attending to several points on a curve already drawn we are attending to the *motion* of the body whose trajectory that curve describes. To overlook this is to confound the steps of a staircase with the action of ascending it. What such a description leaves out is just the content of the intervals between the successive awarenesses of concepts. And that content is not, indeed, just more 'filling' of the same kind (conceptual, imaginative), but that from which the "substantive parts," conceptual and sensory, arise, and therefore something prior to them. This underlying process, thinking "*prise sur le vif*," is that dynamic schema which Bergson describes as "*développable en images ou concepts multiples sous forme implicite et potentielle*." It is upon the dynamic schema in activity that an act of creative thought (intuition) so intervenes as to complete it. Since, in speaking of the dynamic schema we are speaking of the "transitive" and not of the "substantive" parts of '*la pensée vivante*,' its character cannot be defined by concepts and through discourse, but only indicated indirectly. Examples of its presence, however, are plentiful; as, e.g., when Racine declared "*ma tragédie est faite*," though not a line of it was written; when, trying to recall a name which is 'on our lips' yet does not come, we reject wrong names suggested but cannot utter the right one; wherever, in short, there is a "*démarche de pensée productrice*" creative of hypothesis, as in playing at chess, there is the dynamic schema in activity.

In view of this account of dynamic schematism and of the aim of philosophic practice, we are now in a position to understand in what "the return to immediacy" consists. As I understand it, it consists in intervening in any stream of discursive thinking, piercing through its conceptual texture to the dynamic schema itself, and experiencing the content of the lived moment on which is overlaid the interpretation that we read off conceptually at the next instant (i.e. "*avant que la tension intérieure de l'invention s'y soit cristallisée en résultat formulable*"). It is to the 'cogito' that return must always be made. Plainly, then, the intuition in question is not the 'intuition in imagination' of Kant, nor the 'intuition of simple natures' of Descartes. Immediacy is evinced at two levels in epistemological evolution. At the earlier, before the continuous real has been broken apart and parcelled-out in thought in deference to the utilitarian motives of common sense and

¹ William James, *Principles of Psychology*, I, ch. ix, especially pp. 243-244.

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science, it is exemplified in a less pure form, as co-existent with, but opposed to, the conceptual and imaginative contents of thinking. Immediacy occurs again, in a purer form, at the term of our discursive thinking, where it is disclosed in a genuinely creative act—purified from all the incrustations, conceptual, sensory, verbal, that concealed it in the meantime—as the fruition of a long and arduous process of discourse, analytic and symbolic, and therefore both posterior and superior to the discursive process from which it has issued. At its reappearance, it transcends not only the discursive process but also that opposition which discourse institutes and which its conceptual description presupposes—the distinction between subject and object, the knower and the known—so that conscious activity and creativity are ultimately seen to be one and the same. At the moment of insight there is no distinction of knower and known, then nascent reality in its primitive fluidity is *vécue*—hence the idealist character of M. Le Roy's philosophy. Full intuition is one with absolute existence, for these are simply two descriptions of a single process which is reality, the 'duality' of the descriptions corresponding to nothing in that unbroken reality itself, but only to something ineradicable from our *conception* of what it is to 'know reality.'

It remains to notice briefly the consequences, practical and theoretical, of this theory of intuitive thinking. Intuition is always in some degree inventive, and never is there invention in any field that does not issue in an act of insight. Here, as before, to comprehend the inventive character of thought is to know its *démarches*, not its *œuvres*. Life and thought are a gradual realization, not a summed reality, and philosophy is simply the spirit of invention become cognizant of its own initiatives and powers. The whole material of the sciences—its propositions, laws, principles of inference no less than its objects and facts—are through and through relative. What is at one date regarded as 'a fact' becomes modified by subsequent theory and inventive 'discovery.' Thus the whole practice of positive science is a process in which revision continually supersedes revision. Any one such revision is essentially a new vision of old facts in a new arrangement, and successful rearrangement is the discovery of new truth. But no new re-organization is ever a final and absolute arrangement, it marks only a stage towards some still further revision; hence any arrangement is a "verification" of some further revision, in the sense that it was solely from *that* arrangement a passage to the subsequent revision was possible. Invention and discovery consist, then, not simply in the perception of a 'new fact' ("substantive part"), nor simply in imagining a fresh arrangement of facts with which we are already familiar. There is no hard and fast division between 'fact' and 'form of organization.' An 'already-known fact' can only be a constellation of certain concepts organized in a certain way; discovery of a 'new fact' can be nothing but a more suggestive and fruitful *re-conception* of what was reified in our previous concepts, or a new *organization* of such re-conceptions. Novelty is in that sense relative. In so far as our present thinking about a field of 'parcelled-out' objects continues to employ or to presuppose the same fundamental concepts as our earlier thinking about that field, this present thinking only *develops their consequences*, and so far has not the character of genuine discovery or innovation. Only when the former field is contemplated under new concepts which themselves 'innovate' a new distribution, and a new definition, of the objects of the former field, have we discovery. And innovating imagination ("imagination novatrice") cannot operate until the former field has become so familiar that we can experiment in imagination upon it, dissociating at will what we had accepted as conjoined, and come in this way to envisage alternative possible systematiza-

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tions. There must elapse a period of 'incubation,' during which all possible organizations are contemplated but none is chosen. Soon or late there then issues an anticipation or vision of the potential development of one, as against the other alternatives, and therewith its provisional and temporary acceptance. The whole process is continuous, the attainment of one organization of concepts being but a resting-stage and starting-point for the transition to another. Thus the processes of discovery and verification are themselves but "transitive parts" in the continuous stream of intuitive thinking or actual becoming.

S. V. KEELING.

PHILOSOPHY IN GERMANY

THE main interest of BERNARD BAVINK's book on *Discoveries and Problems of the Natural Sciences*¹ lies in his comprehensive survey of scientific theories and his consideration of philosophical problems in relation to these theories. His method is to raise philosophical problems after presenting the scientific views which give rise to them. And accordingly it is unjust to concentrate on his philosophical opinions, as I intend to do. One can roughly indicate these opinions by saying that he believes the philosophy of science to be concerned with facts about existent things, and not with *a priori* forms of thought, nor with conventions adopted for convenience. He believes in "*metaphysics a posteriori*."

The book is divided into four sections dealing with chemistry, physics, astronomy, biology, psychology, and the sociological sciences. I shall only consider two of these sections—Section 1 (concerned with chemistry and physics) and Section 3 (concerned with biology)—so the reader must realize that the book contains a great many more problems than are here considered.

In Section 1 Bavink raises a number of philosophical problems, in particular about scientific hypotheses, substance and causality. He maintains that our view of these must depend on physical discoveries, and that we shall see when we consider the course of physical development that philosophy should change its beliefs as a result of changes in physics. Accordingly he gives a detailed survey of the development in physical views, considering first the classical mechanistic theories (e.g. of Newton and Laplace), then passing to such later developments as the kinetic theory of temperature and the electromagnetic theory of light, and coming finally to the theories of relativity and quanta.

How do these changes affect the philosophic view of hypotheses, substance and causality? Let us first consider hypotheses. The main question Bavink wishes to raise about these is, How do they differ from statements asserting some fact? Is it simply that we are certain of the latter but not of the former? or is the difference more radical—are hypotheses simply "conventions" or "pictures" which enable us to predict facts? If now we consider the development of physics, we shall see that certain hypotheses have been verified, and this will help us to answer these questions. Bavink takes the atomic theory as an example. This remained an hypothesis for a long time, as there was little experimental evidence to support it. But experimental evidence increased to such an extent that now, so he believes, it is certain

¹ *Ergebnisse und Probleme der Naturwissenschaften*, S. Hirzel, Leipzig, 1933, 5th edition, p. xii + 650.

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that atoms exist—they are real as water waves are real, and the proposition "matter consists of atoms" is of the same kind as "plants consist of cells." The fact that no one has ever seen an individual atom is irrelevant, for we should not take sight as the only criterion of existence. We can see its action, and this is a sufficient criterion for its existence. And what, in Bavink's view, does this prove about hypotheses? It proves that an hypothesis only differs from a statement about fact because we are not certain that what it supposes is true. It proves that an hypothesis is not merely a "convention" which enables us to predict.

Bavink then considers substance. The traditional philosophical view drew a sharp distinction between substance as that which filled space and the changes it underwent, which occurred in time and required "forces" to bring them about. This view conformed with the classical view of physics. Laplace regarded the world as an enormous system of particles whose only property was inertia, and which were related to each other by measurable forces acting as attracting and repelling agents. But modern physics does not distinguish between space-filling substances and their temporal changes. Its elements are four-dimensional quanta, and these are ordered in certain ways, *e.g.* to form electrons, atoms, molecules, etc.—the "eternal substances" of the classical view are replaced by four-dimensional events. And thus philosophy, basing itself on physics, must abandon the traditional distinction between substance and its changes.

And for similar reasons philosophy must abandon causality. Here again its traditional view agreed with the classical theory of physics. According to Laplace, if anyone knew the exact positions and momenta of every particle at a given instant, and knew also all the causal laws determining their interactions, he would be able to overlook all past, present, and future events with absolute precision. It was obvious, of course, that no one did know these laws, but such knowledge was the ideal which physics put before itself. Now, however, physics believes that the world consists of quanta, not of particles, and it is nonsensical, not merely practically impossible, to obtain exact measurement of the place and momentum of a quantum at a given instant. The "initial condition" which Laplace presupposed simply doesn't exist. Physics, accordingly, is giving up its old ideal and looking for statistical instead of causal laws. Such laws allow the physicist to make very exact statements about collective wholes formed by large quantities of electrons and occurring frequently—and this explains why we can predict so accurately both in science and ordinary life—but they do not permit of any such accuracy in statements about an individual electron or about a collection of any electrons which is too complicated to recur. Thus we have to choose between two types of explanation—causal or statistical. It is quite wrong to suppose that statistical laws alone do not provide an explanation or that they imply chaos or free will or miraculous intervention. And physics must determine our choice. In Bavink's view the physics of to-day leads to the statistical explanation. It now appears that the world is ordered according to statistical and not according to causal laws. And we must realize that we are simply deciding about a question of fact—we are neither asking whether one hypothesis is more convenient than another nor discussing *a priori* forms of thought.

In the third section Bavink considers among other things the biological experiments which bear on the controversy between mechanists and vitalists. Here, too, the issue has been changed by recent developments. When the classical view prevailed in physics, it was thought that such processes as nutrition, growth, and reproduction could be explained in the same way as

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material processes. But it is now realized that living bodies are not machines, and that the laws which explain them, even if chemico-physical, must differ from the laws that explain material processes.

The main point in the controversy is whether vital phenomena involve only a new and peculiar combination of physical factors, or whether they involve an altogether new kind of factor. Bavink cannot agree entirely with one side or the other. Within the last thirty years there has been a great deal of experimental work which bears on the subject, and which Bavink reviews in considerable detail. We know, for example, that the individual cells of an embryo usually have the capacity to develop along several different lines—transplantation of cells from one part to another has revealed most startling results—and tremendous progress has been made in giving these and similar phenomena a chemico-physical explanation. But, on the other hand, there is no doubt that vital processes in most cases are purposive—they subserve the preservation of the individual or species; and this fact is the best defence of the vitalists' case. Another point in their favour, Bavink thinks, is the difficulty of explaining the original appearance of life in purely chemico-physical terms. Finally, however, he suggests a third alternative, based on the belief that both mechanists and vitalists are taking a wrong view of chemico-physical explanation. Both have taken such explanation to be strictly causal. The vitalists have assumed additional causal factors, *entelechies*, which fill up the gaps left by chemico-physical explanation, and they have not been successful in showing how *entelechies* are related to chemico-physical processes. But we must bear two points in mind: first, that causal explanation is ceasing to be the physicist's ideal, and, secondly, that biological phenomena are certainly determined through being parts of an organized whole. It may be that the ideal of chemico-physical explanation will alter to such an extent that it embraces determination through organized wholes. And so, Bavink thinks, the controversy may be settled through a difference in the conception of chemico-physical explanation. But he admits that he can only give the vaguest idea of what this difference would be like.

HELEN KNIGHT.

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An Essay on Philosophical Method. By R. G. COLLINGWOOD. (Oxford: At the Clarendon Press. London: Humphrey Milford. 1933. Pp. xii + 226. Price 10s.)

Mr. Collingwood's discourse on method is different from that of Descartes. Descartes expounds his method by applying it to clear up various metaphysical problems. Mr. Collingwood expounds his by applying it to clear up the problem of method. Thus his book is an application of philosophical method to the problem of philosophical method. It appears to owe a good deal to the Crucifixion of Hegel.

If philosophical method is to be different from scientific method, this must be because philosophical concepts are different from scientific concepts; and this is the first point to which Mr. Collingwood attends. He starts with the fact that any general concept has various specifications, which are its kinds. In the case of scientific concepts, such, *e.g.*, as lines and triangles, the kinds are mutually exclusive. If a line is straight it is not curved. If a triangle is scalene it is not equilateral. The case of philosophical concepts is quite different. It is not possible, *e.g.*, to separate affirmative and negative judgments as mutually exclusive kinds. Think out the nature of affirmation and you will see that it involves an element of negation; again, negation involves an element of affirmation. Similarly we cannot regard the pleasant, the expedient, and the right as mutually exclusive kinds of good. It cannot be said that whatever is pleasant is both inexpedient and wrong, or that what is right is both unpleasant and inexpedient.

This difference between scientific and philosophical concepts Mr. Collingwood expresses by saying that philosophical concepts involve overlap of classes, scientific concepts do not. And it seems that he intends this distinction to be a precise and universal distinction between philosophical and non-philosophical concepts. Where there is overlap the concepts belong to philosophy and not to any other study. Where there is no overlap the concepts belong to some other study and not to philosophy (51). [If so, then the classification of concepts into those belonging to philosophy and those not belonging to philosophy is itself one where there is no overlap, and therefore one which does not belong to philosophy, even though philosophical method essentially depends on it.] If there are any concepts that seem to belong both to philosophy and to some other study, close investigation will show that they are interpreted so as to show overlap in philosophy and not to show it in the other study (35).

What Mr. Collingwood's positive conception of overlap involves is not clear, I think, from his chapter on overlap, where on the whole it seems to have primarily negative rather than positive significance; and it is necessary to proceed to the next chapter, on the Scale of Forms, for further information. Here the writer is concerned in the first instance with a further difference between scientific and philosophical concepts [this difference again showing no overlap and therefore not belonging to philosophy].

The kinds of a particular concept can differ in degree as well as in kind. Thus ice water and steam are all kinds of H_2O , differing in degree of heat. In the case of philosophical concepts the kinds not only can differ in degree,

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but must do so. And in their case the different kinds falling under the concept are different degrees of the concept itself. *E.g.*, the pleasant, the expedient, and the right are kinds of good, and they differ in degree of goodness. Ice water and steam do not differ in degree of H_2O : they are all equally H_2O . The pleasant, the expedient, and the right are not all equally good.

Mr. Collingwood expresses this by saying that in a scientific concept the variable is extraneous to the essence of the concept, while in a philosophical concept the variable is identical with the essence. And he generalizes and says that all philosophical concepts have this character: their kinds are not coordinate kinds, all equally specifications of their concept, but they differ in the degree to which they are specifications of their concept. Thus, *e.g.*, pleasure is only in a low degree good; it is not as good a kind of goodness as is rightness, which is good in a higher degree. Nevertheless pleasure is a distinct kind of good (73-4).

Mr. Collingwood brings out the peculiar relations involved in philosophical concepts by distinguishing between "opposition" and "distinction" in regard to kinds. By "mere opposition" he appears to mean the relation between different instances, when these instances differ only in degree and not in kind. As, *e.g.*, hot and cold water are not different in kind, but only in degree of heat. Since with philosophical concepts difference of degree is always also difference of kind, it follows that in regard to them opposition is always at the same time distinction; it cannot be "mere opposition." Good and bad are different degrees of goodness, and hence opposed. But they are also distinct. Badness is a definite kind of goodness, as well as being opposed to other kinds. So error and truth are different degrees of truth, and hence opposed. But error is not merely the absence of more of something, whose presence would be greater truth; it is also a distinct and positive kind of truth.

Thus a philosophical concept gives rise to a scale of forms which differ at once in degree and in kind, the difference in degree being inseparable from the difference in kind. Each form is at once opposed to and distinct from all the rest. But there is thoroughgoing overlap, since that in respect of which the forms vary is the essence of them all. The kinds of truth differ in degree of truth. The kinds of reality differ in degree of reality. The kinds of pleasure differ in degree of pleasure. The kinds of beauty differ in degree of beauty. [And so on indefinitely. The kinds of overlap differ in degree of overlap. The kinds of philosophical concept differ in degree of philosophical conceptuality. The kinds of philosophical problem differ in degree of philosophical problemativeness; so that some concepts and some problems belong to philosophy in a higher degree than others. Thus if scientific concepts only overlapped a little with philosophic concepts, we could allow the distinction between scientific and philosophic concepts to be at least to a low degree a philosophical one].

Mr. Collingwood interprets this general situation in a special way. Pleasures which are different in degree of pleasure he regards as pleasures which are different in the adequacy with which they embody or exhibit the essence of pleasure. Beauties which differ in degree of beauty, he takes as beauties which differ in the adequacy with which they embody the essence of beauty. And so in general. Each kind, of a philosophical concept, is trying with all its might to shine forth as the whole essence of the concept, but succeeding only to a degree of adequacy.

This generalization leads at once to the determination of the method proper to philosophy. For it is clear that the proper method of dealing with concepts, whose essential differences are differences in the adequacy with which

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they express the nature of the concept of which they are the different kinds, will be to put them in the setting of the scale of forms, and see them as marking a point of achievement on that scale with respect to all the forms lower down, and a point of failure with respect to all the forms higher up.

Again, philosophical inquiry will not be a process of adding new knowledge to old, but one of passing from less to more adequate knowledge. Its affirmations will be negations as well. Indeed, each affirmation will mark the occupation of a point on the scale of forms, by being a rejection of all the occupants of points lower in the scale, and especially the rejection of the occupant of the point just lower in the scale, while being an affirmation in a more adequate way of what they were managing less adequately to affirm. The affirmations of philosophy, again, will not be merely hypothetical, but hypothetical and categorical at once, with the categorical predominating, since this is the more adequate form.

Further consequences of all this in regard to philosophical method become clear in Chapters VIII and IX. There is a final chapter on philosophy as a branch of literature. I have no space to discuss these chapters, but the result is to justify the method of studying philosophy by studying the philosophic tradition through the history of philosophy, and thinking out the degrees to which the various types of philosophy (which are not mutually exclusive, but overlap, are not only opposed, but distinct, having their proper places on the scale of forms) succeed in being adequate embodiments of philosophy. With luck the student should (at least occasionally) succeed in showing that some of the great philosophers of the past were trying to say inadequately what he is saying much better (even though what they said was a different kind of thing).

L. J. RUSSELL.

Hobbes. By JOHN LAIRD. (Leaders of Philosophy Series.) (London: Ernest Benn, Ltd. 1934. Pp. xii + 324. Price 12s. 6d.)

An intelligent reader of Professor Laird's earlier books would have expected from him an excellent volume on Hobbes, and the expectation is amply fulfilled. The book presents the same combination of appreciation, critical shrewdness, and wide erudition which marked the author's earlier work on Hume, and should take a permanent place henceforth as a worthy companion by the side of Croom Robertson's little monograph, so long recognized in this country as a model of all that a work of this kind ought to be. To be sure, no production of man is flawless, and I trust Mr. Laird will not take it ill if I mention a few points in which I think his admirable book might have been made even better than it is. There are the inevitable errors of the press which have escaped detection. Most of them are trivial and easily remedied, but it is unfortunate that some of them occur in the dating of events in the hero's life. Thus (p. 11, last line) 1664, as the context shows, means 1646; the date given on p. 21 for Sorbière's visit to England should be 1663 (not 1653); the statement on p. 48 that Descartes's *Monde* was written "about 1634" is refuted by its own context, since the condemnation of Galileo, which led Descartes to suppress the book, and Galileo's abjuration took place in 1633. I could wish to be sure whether the author has verified the name of the Nottinghamshire gentleman to whose son Hobbes acted as tutor (p. 6). He, like Leslie Stephen, gives it as Clinton, but in the *Vita* and *Auctarium* it appears as Clifton; which is the true form? The printer has played Mr. Laird a worse trick at p. 111, where Hobbes is said to have hesitated between

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defining force as *v* or as *mv*; the words of the text show that *v* here should have been *v*².

In his generosity to the reader, Mr. Laird has documented his statements and quotations very fully. But I fear his methods of reference, as described in the *Prefatory Note* on p. xii, may too often prove baffling. Since his habit is on the first mention of a book to introduce an arbitrary abbreviation of its title for use in all subsequent citations, there should obviously have been a complete list of these *compendia* given, either after p. xii or at the end of the volume; without such a list no one can be expected to recognize the numerous recurring abbreviations. And perhaps other readers may, like myself, be a little annoyed by the trick of constantly referring to really famous books merely by the volume and page of some standard edition of *Complete Works*. It is difficult to remember throughout 300 pages exactly what writings of Hobbes himself are contained in each of the volumes of Molesworth, and confusing to find Bacon's *Advancement of Learning* disguised as *E. and S. III*. Again, it is not easy to check references to Galileo's *Dialogo* when they are given by the pages of the seventeenth-century English version, a book few of us are likely to have at hand. But these are, of course, very minor faults.

A "devil's advocate" might make more of the point that Mr. Laird here, as in his book on Hume, suffers from a certain inability or disinclination to tell a simple tale in the simplest way. He likes to tell his story by indirect allusion, and has a fondness for epigrammatic "point" which is the more irritating that the epigrams often refuse to "come off." One example shall suffice. We are told (p. 17) of Seth Ward that he said "he had rather be the author of one of Mr. Hobbes's books than be King of England," by which, Mr. Laird added, "Ward did not mean that he would rather be dead." Now what is the drift of this facetious comment? As the remark was made—if it ever was made—under the Commonwealth, I can only conjecture that the meaning may be that Ward was looking forward to a possible Restoration, and showed it by the implication that there was still a "rightful King." But if this is what Mr. Laird means, he has chosen a curiously obscure way of saying it; point is bought too dear at this price.

For the amazing industry with which Mr. Laird seems to have read everything which might throw any light on Hobbes there can be nothing but grateful admiration. I am particularly grateful myself for what I have learned from him about some of Hobbes's opponents who had hitherto been to me mere names, or not even names. But the very range of this multifarious reading has, I think, inevitably led to occasional mis-understanding of authors quoted for comparison. To take a striking example, we are told (p. 112) that Galileo (a reference is given to the opening pages of his *Dialogo*) "had held with Aristotle that circular motion, being 'perfect,' could alone be 'natural.'" The very passage to which Mr. Laird sends us is enough to show that Galileo did *not* "agree with Aristotle." Aristotle is there adversely criticized for his well-known doctrine that there are *two* "natural" motions, circular revolution of the celestial spheres and rectilinear uniform ascent and descent of the "elements." Galileo's own point is not, as Mr. Laird's language would suggest, that there are no rectilinear motions in nature, but that those there are are *accelerated*.

Probably Mr. Laird's inspection of Galileo was too hasty, since he goes on to tell us (p. 113 n.) that possibly Galileo never contemplated genuine continuity of acceleration. Yet in the very context to which he has referred, Galileo says in so many words that in passing from one velocity to another an accelerated motion *traverses all intermediate velocities without remaining*

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in any of them. Again, at p. 164, n. 2, I remark a curious but palpable error, plainly due to hurried reading, about Aristotle's view of appetitions. It is said that Aristotle held that *ὁρεξις* is always for the agreeable, and we are referred to *De Anima*, 414b, 6, where what is really said is something quite different; that concupiscence, *ἐπιθυμία*, is always for the agreeable because this (*αὐτή*)—viz. concupiscence—is *ὁρεξις* of the pleasant. It really looks as though Mr. Laird has misread the *αὐτή* in this phrase as *αὐτῇ* and mistranslated "*ὁρεξις* itself is for the pleasant." It is notorious that Aristotle's view was that *ὁρεξις* may be for any one of three things, the *honestum*, the *utile*, the *dulce*. Similarly there are one or two remarks about the schoolmen which would not perhaps stand pressing. We are told (p. 155) that "even an Aristotelian like Suarez" maintained that reasoning proceeds by "compounding and dividing," as though this were something exceptional about Suarez. But since "compounding and dividing" was the standing description of affirmation and negation, it is hard to see how any "Aristotelian" could have spoken differently. On the other hand, should not the sweeping statement that most "scholastics" regarded "phantasms" as quasi-corporeal be better supported than by a solitary reference to Suarez? And should the statement that Bacon believed in the possibility of *vacua* be made without justification, on the strength of *N.O.* II. 48, when Bacon elsewhere in the same work "denies the fact"?

These are all comparatively small points, and I only mention them because they do suggest to me a doubt how far one can rely implicitly on other statements about writers whom I have not read, when the passages referred to are not quoted at some length.

I may now proceed to the much pleasanter task of expressing my high appreciation of Mr. Laird's positive achievements. His book falls into three main divisions dealing respectively with the life of Hobbes, with his doctrines, and with his influence. In all of them, with some allowance for a certain carelessness about dates in the first section, due presumably to hurried proof-correction, the work is of a very high order. The biography calls for particular commendation on its successful vindication not merely of the respectability, but of the real honesty and attractiveness of a character systematically maligned by opponents. (They had, however, the excuse that Hobbes was, after all, the aggressor by his derision of the Universities and the clergy, and an aggressor with a sharp and not too scrupulous tongue.) The whole account of Hobbes's philosophy is admirably done, and will, I think, take rank as the best exposition we have so far in the English language. It is conscientious and careful, and there is no serious attempt either to blink the contradictions in which Hobbes entangled himself by his stubborn corporealism or to exaggerate them. Indeed, I think when Mr. Laird pleads that there is no real inconsistency between the materialism of the theory and its phenomenalism, he is probably letting Hobbes off rather too good-naturedly. This seems to me at least a hard saying, and I doubt whether it can be defended without a more elaborate examination than Mr. Laird has been able to bestow on the point. I had also hoped that the next monograph on Hobbes might contain a brief but serious account of his singular excursions into geometry. I should have liked some account of the methods by which he squared the circle and duplicated the cube, and some illustrations of the genuine acumen of many of his observations about the principles of mathematics, rightly commended by De Morgan. Even without such going into detail, the reader might have been informed that the value on which Hobbes finally pitched for $\pi(\pi - \sqrt{17})$ is by no means peculiar to himself, and that the remarks so highly appreciated by De Morgan are a protest against that illogical

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recognition of "real infinitesimals," which was an unfortunate, though perhaps inevitable, stage in the development of the Calculus, so that the old circle-squarer is also a sort of distant precursor of Weierstrass. But I suppose the limitations of space imposed by the character of the series to which Mr. Laird's book belongs compelled the exclusion of this interesting matter. A critical study of Hobbes as would-be mathematician is still *à faire*, and might be an excellent subject for a Ph.D. thesis.

For Mr. Laird's treatment of the *historically* important thing in Hobbes, his ethical and political thought, I have nothing but praise. I fully agree with him that the whole theory can only be properly estimated in the light of "scholastic" political philosophy, and in his view that the schoolmen are the best political theorists modern Europe has ever seen. It is most refreshing to read his admirable demonstration that Hobbes was intensely in earnest in insisting on the necessity of a morality not merely of justice but of mercy and benevolence, and equally sincere in his conviction that the "sovereign" is morally bound to strict observance of the "law of nature." Hobbes's principles, therefore, as Mr. Laird rightly says, are absolutely opposed to the "Machiavellianism" sometimes loosely imputed to him, and they were never meant as an excuse for "libertines." Indeed, as Mr. Laird observes, the great difference between Spinoza and Hobbes as political theorists is that Spinoza really does teach an immoral "Machiavellianism" (when, for example, he denies that a State has any obligations of good faith), and Hobbes does not. The contempt of the modern *Realpolitiker* for "scraps of paper" is Spinozistic and Machiavellian; it is condemned altogether by Hobbes's view that the *sovereign* is obliged "before God" to fulfil the "natural law," and that it is "natural law" that covenants must be kept. In view of the deification of Spinoza by his devotees, I think another remark of Mr. Laird's as pertinent as true, that (p. 303) Hobbes had a very strong sense of duty, though he tended too much to identify duty *in the subject* with the mere keeping of the civil law; while Spinoza, for all his appreciation of "values," writes as though he had no sense of duty at all. (This is, in fact, exactly what the worthy Blyenbergh found wanting in his doctrine, and it is significant that though the *Ethics* has some excellent things to say about certain virtues, it never once mentions duty.)

I am particularly glad that Mr. Laird has given a fairly full account of the dispute between Hobbes and Bramhall about Liberty and Necessity, which, as he says, is one of the best pieces of philosophical controversy in any language. I am not *quite* so sure as Mr. Laird that Hobbes would have been pronounced the victor if the issue had been decided "on points." Much depends, I should say, on how the points are to be counted. In view of the simple-minded faith of Leslie Stephen, the last English historian of the controversy, in "scientific determinism," it is to the good that the matter had been reviewed by a philosopher who is neither wedded to determinism nor under the delusion that because Bramhall was a trained "scholastic" his views must be philosophically negligible. In the main I think I agree with Mr. Laird that Bramhall did not fully make out his own case, chiefly because he was not quite clear what his case was. But I think that Hobbes's identification (forced on him by his obstinate corporealism) of all determination with determination from *outside*--an identification freely confessed by Mr. Laird--made his position frankly absurd, and that Bramhall fairly exposed the absurdity. So I suppose the "points" on which Hobbes is pronounced to have scored are those mentioned on p. 105 ff., as replies to Bramhall's ethical objections to determinism. I doubt if Hobbes was quite as successful on *all* these points as Mr. Laird thinks. "Determinism does not

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imply that praise and dispraise are meaningless." Perhaps, but does it not imply that the meaning to which they owe most of their effectiveness is *false*? The very reason why they work on us so powerfully is that they are understood to imply recognition of good or ill *desert*, and is *desert* more than an illusion on a determinist theory? And I should think Mr. Laird himself, on reflection, would admit that "the right to destroy what is noxious" is a dubious basis for a sane theory of punishment.

Hobbes's general social theory is so well known that it is unnecessary to follow Mr. Laird in his careful and lucid exposition of it. I would merely direct attention to the excellent remark that the whole conception of man as a calculating egoist, on which the doctrine is based, is ruined if we take Hobbes's account of determination as purely *extrinsic* seriously. (Commonly the materialism and the egoism are spoken of as inseparable; as Mr. Laird rightly points out, the one, in fact, destroys the other.)

The account of Hobbes's opponents and critics is full of interest. I think I agree with what is clearly the author's view that of all the better known British opponents Cumberland is the best, as well as with his high estimate of the criticisms of Pufendorf, who can hardly be called an opponent at all. But I think some of Hobbes's Anglican critics are disposed of rather too summarily. I do not believe it a sufficient reply to Cudworth to argue (p. 274) that even if a moral law is simply an enactment, it is "eternally" what it is, viz. an enactment. This does not seem to me any rejoinder to Cudworth's contention that no arbitrary enactment can make that *good* which is not antecedently good in its own nature. Butler, in particular, I fear, gets much less than justice. In view of the language used about the services of Shaftesbury to ethics in the Preface to the *Sermons*, it strikes one as hard to accuse the Bishop (p. 283) of being "tepid" in his acknowledgments, and to explain that the "tepidity" is accounted for by the Deism of Shaftesbury (who always professed to be a "Broad Church" Anglican). Nor do I believe Butler would have found any difficulty in answering the question (p. 284) why, if *all* "passions" are alike "disinterested," a man is not free to stop being benevolent, as he is to stop drinking his wine, as soon as benevolence ceases to please him. It is not its disinterestedness but the fact that conscience enjoins it which, according to Butler, makes benevolence a duty. Conscience requires me to go on being benevolent; it does not require me to drink a second glass of wine if I will to leave off after the first. And to say that Butler "conceded the point" in the well-known paragraph at the end of the eleventh *Sermon* is, I am sure, to miss Butler's grave irony. A man does not introduce a statement of his own principles with a "let it be conceded that." The meaning plainly is "*even though* we were to concede, as I do not, that self-interest must be paramount, a man would still be wise, even from this point of view, in taking the trouble to be benevolent."

To conclude with a passing reference to two very minor matters: If Disraeli's reference to "Hobbesism" in *Virian Gray* is to be chronicled (p. 247 n.), why is Fielding's Parson Barnabas, with his horror of the *Lemathan*, forgotten? And why does Mr. Laird think that the "Cimon" of Berkeley's *Alciphron* should be Hobbes? (Locke's Archelaus, I may remark, ought not to have been honoured with inverted commas on p. 281; he was, of course, an historical man, a disciple of Anaxagoras, and the teacher of Socrates.)

A. E. TAYLOR.

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Experience and its Modes. By M. OAKESHOTT, Fellow of Gonville and Caius College. (London: Cambridge University Press. 1933. Pp. viii + 359. Price 15s.)

In size and quality of writing this is as considerable an essay in idealism as we have had from a native in recent years. Mr. Oakeshott ascribes his indebtedness chiefly to Hegel's *Phenomenology of Spirit* and to Bradley's *Appearance and Reality*, the impress of the latter being the more obvious. His most general principles are that all experience involves judgment (which passes into the assertion that all experience, even volition, is judgment), that in consequence it consists of ideas, and that these ideas demand to be made coherent. Since reality is something judged it must be experience, but experience as a "world." If we could attain to it we would find it to be a complete experience completely organized in terms of coherence, but as none of us can attain to it we may define reality formally as the ground, immanent in experience itself, of our demand for coherence, or of the aptitude of ideas to expand into a system. This effort after coherence, however, has a tendency to run into blind alleys, to seek limited unifications, and—which is worse—to rest content with one or other of these as final. The limitation is one not of extension but of initial categories: each unification is an interpretation of the whole, but in terms of an arbitrarily restricted set of notions. Such a unification is called by the author, doubtless for lack of a better word, a "mode" of experience. Three modes—historical, scientific, and practical experience—are examined in turn at some length, the main purpose being to exhibit their formal characteristics and show that these disqualify the respective mode from being a satisfactory synthesis of all experience.

Historical experience is a mode because it is not a mere series but a "world," for the process of criticism by which it is constructed determines the temporal order by a non-temporal one: nothing is admitted as historical fact until, through being evidenced, it is integrated with what is really a logical scheme. And it is a mode of *experience* because every element of it, being the product of a judgment, is an idea, an idea being, of course, inseparable from experience. (Mr. Oakeshott's odd charge that some historians make independence of *all* experience the criterion of objectivity both imputes to historians a philosophical sophistication which they neither have nor want to have, and implies that they are too stupid to know that experiences *do* *not* *come* for a great part of their subject-matter.) History is the past considered in its pastness; any motive or consideration that relates to the bearing of the past on the present is an intrusion from the side of practical experience, harmful, as well as irrelevant, to the historical judgment. Nevertheless, just because it is experience it is a *present* world of ideas, and its being a present which is conceived as past is the contradiction, or one of the contradictions, that should prevent us from regarding historical experience as the completely "satisfactory" experience.

Science is defined as "the attempt to think a common, uniform, and impersonal world," the mark of scientific ideas being "absolute communicability." The only type of idea that has this mark is the idea of quantity, or rather quantity in the specific form of motion. Hence science is the interpretation of the whole of experience as mechanical, so that "science and physics are identical." Being constituted as well as defined by the category, it has no differences of subject-matter; it is just a body of coherent ideas of quantity. Neither past nor future (that is, neither history nor prediction) enters into it, nor even present events as perceived (that is, there is no such thing as experimental verification). It is incurably though quite consistently abstract. Con-

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sequently it cannot lay any pretensions to being that coherent whole of experience which is perforce concrete.

Practical experience is all experience regarded as alterable by the action of will, and since volition is concerned with the present as present and always involves judgment, practical experience is the "world" of present fact or ideas made coherent with a view to action. Art falls within it, and religion is its fullest expression. It is not, indeed, the world of value, but since this is limited by the nature of the practical world within which it is to be actualized, the two worlds are inseparably linked. But even in their conjunction they have no claim to be, or to be able to become, that coherent totality which thought in its integrity demands, the reason being that the detailed transformation of the "ought to be" into the "is" is essentially an endless and therefore an ever-incomplete process.

We have, then, at least three "modes" of experience, each, because experience, composed of ideas; each a "world" of homogeneous ideas because defined and organized by a single category; each therefore logically distinct from and consequently irrelevant to the others; each autonomous; and each displaying some essential abstractness, incompleteness, or contradiction when put forward as the total outline or ground of experience.

Despite my sympathy with certain aspects of Mr. Oakeshott's idealism, I have to admit that I find his exposition unhelpful. One reason is that, like his master Bradley, he is more expansive in criticism than in construction. Certainly his primary affirmations are left undeveloped. The inseparability of reality from experience needs to be safeguarded *argumentatively* from solipsism. To say that "all experience is somebody's experience," "but no experience is merely the experience of a particular mind as such," is to state, not to solve, the problem. There are many thinkers who are convinced that what makes experience experience is precisely its being somebody's, so that when it, particularity is removed what is left has no title to the term. But Mr. Oakeshott's position appears to be that what makes my experience more than mine is judgment, and this leads to the coherence theory of truth. This too unfortunately, is reaffirmed rather than reargued, and reaffirmed without any appreciation of the difficulties which realists have found in it. The author's tendency is to suppose that it is established by exposing the difficulties — the correspondence theory; and the theory so defended is characterized much more vaguely than the theory attacked. One would have welcomed an attempt to define exactly what sort of coherence is meant, and to explain why, if there is never datum but only inference, completion of inference has to wait for further experience in any sense that retains the notes of immediacy and novelty. Do we need the future to provide only more time for reflection and more data? Are incoherencies removed and gaps filled by further experiences when these are construed as judgments without data? These may be imperfect questions, since the case really rests on the *inseparability* of datum and inference, of matter and form, but they are the kind of question which Mr. Oakeshott's emphatic affirmations provoke, and I am sorry, for the sake of idealism, that he holds his idealism so serenely that he has failed to gauge the strength and quality of the realist reaction to the coherence theory.

The doctrine of modes is peculiar. Most philosophers would agree that science, etc. are products of different categorial selection from concrete experience, and are therefore inevitably partial, but few would conclude that they have nothing to give to philosophy. But the most peculiar feature is Mr. Oakeshott's way of designating each mode by a familiar term which he redefines with a narrowness for which I can find no warrant. For example, science is defined as the study of motion; consequently it has nothing to do

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with the past; consequently cosmogony and biology are not science but "natural history." Whatever they are they are connected very massively with experience and therefore deserve to be examined; merely to note their categorial difference from mechanics and ignore their profound similarity of attitude and method is not quite in keeping with the concreteness which Mr. Oakeshott's idealism desiderates. Moreover, the reduction of physics to theoretical mechanics comes ill from Cambridge, which has done so much to dissolve mechanical physics into an electromagnetic theory for which motion is a secondary concept. On the other fields of experience also he dogmatizes, though always brilliantly, almost aphoristically. The assertion on pp. 98-9, repeated in a sequence of beautifully turned but synonymous sentences, that many historians suppose that every new fact is just added fact, not one that may call for a drastic overhaul of other facts, is a case in point. Damning charges of this sort should give names, to enable us to discover the real culprits. A whole paragraph (p. 112) on Bury's judgment on Gibbon is a plain caricature of it. The statement (p. 309) that no one "aware of the conflict involved" is likely to try to establish both the practical and the ultimate truth of religious ideas is a high-handed condemnation of all theologians and of many very able philosophers. It is a rhetorician, not a philosopher, who writes (p. 129) that the battle of Salamis and the birth of Christ fall outside history because, having considerable human importance, they fall under the category of practical experience; that science is "a folly to be fled from" (p. 219); that consequently the task of thought is not the "synthesizing of its own indiscretions" (p. 218); and that "all attempts to find some practical justification for philosophical thought . . . must be set on one side as misguided" (p. 355). There is something elusive, elusive because indeterminate, about an ultimate truth that is unrelated to history, science, and the inevitable needs of living - for, again, one of the author's cardinal contentions is that the "modes" are not only irrelevant to one another, but also have no contribution to make to the whole truth.

Mr. Oakeshott was moved to write by the neglect into which idealism in this country has fallen. That we have not refuted idealism but only dodged it, and that either the rearguing or the refutation of it is needed to give life to our current discussions, is my own conviction. If the book helps to revive the problems which idealism formulated it will be of great value. But I doubt if it will make converts. The general attitude and principles which it restates are presented with that superior certainty and highly polished verbal indirectness which robbed some of the older idealists of the influence which they might have exerted. It is not conciliating to be liberal with terms of disparagement like "confusion," "nonsense," "gross," and "grotesque," even when they have been shorn of vulgarity by the literary refinement of their setting; and sentences like the following show a concern for verbal effect at the expense of simplicity and directness of thought: "What is achieved in experience . . . not in the sense that it is ever actually achieved"; "Fact is not what is given. Or, rather, fact is given (because there is nothing given which is not made)"; "To know in part is at once to know something less than the whole and to know it imperfectly." Stylistically the writing is brilliant throughout, but the beautiful sentences are spoiled with an emphasis and a balance that arise more out of preoccupation with literary craftsmanship than out of the meaning to be expressed. I believe that the quite remarkable repetitiousness of the book, which could be cut down by half with great gain, is connected with this interest in and truly high capacity for literary art. To this capacity I gladly pay a very respectful tribute; my regret is that it has too often thwarted instead of serving Mr. Oakeshott's able philosophical thinking.

T. E. JESSOP.

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Descartes. By S. V. KEELING, M.A., D.-ès-L., Officier d'Académie. (London: Ernest Benn Ltd. 1934. 1p. xi + 282. Price 12s. 6d. net.)

This original and scholarly work is written for the "Leaders of Philosophy" series, and both the author and the editor are to be congratulated on its conspicuous freedom from the faults usual in works written for a series. It is neither hospitably eclectic nor amiably superficial, and it scorns the tepid affectation of impersonality. It is closely knit and closely argued, it is definite and consistent in its point of view, and its whole approach to the subject is strongly individual. More than once it throws new light on the most familiar positions of Descartes by "snapping" them from an unfamiliar angle. Its sufficiently methodical exposition is varied by cross-vistas, which are among its chief attractions, and constitute a notable tribute to Dr. Keeling's intimacy with the mind of Descartes.

It is Dr. Keeling's avowed intention (p. ix) to restate Cartesian problems in modern terms, and he has succeeded in doing so without allowing his interpretation to be influenced by modern analogies. By this device he enables the modern reader to review Descartes without anyone's prepossessions except his own, and in particular to escape from the "history of philosophy" tradition, which has thrown across all the pre-critical philosophers the omnivorous shadow of German Idealism. Occasionally, as in the discussion of substance, a more historical treatment might be helpful; but it must be admitted that the modernity of presentation contributes largely to the freshness of insight which is Dr. Keeling's most valuable quality.

The book falls into three parts: a historical and biographical introduction, an analytic and comparative exposition, and a critical epilogue concerned partly with the later history of Cartesianism, and partly with its philosophical importance. Of these the second, which is by far the largest, seems to me to be also the best. As an interpreter Dr. Keeling has all the virtues: he has a complete mastery of his material, and his selection is therefore extremely apposite; and he follows the affiliations of his main themes into the remoter parts of the Cartesian system with insight and pertinacity. His review of Descartes's successors is of necessity condensed, though it is detailed enough to reveal his scholarly aversion from obvious (and fallacious) interpretations; as in his discussion of Arnauld's alleged neo-realism (p. 220). His critical estimate is so condensed as to leave little room for subtleties which he could certainly have handled with distinction, and at times is distinctly summary both in form and content. This is doubtless his misfortune rather than his fault, and it is good news that he has in preparation a volume of Cartesian studies in which he will be able to expand at leisure.

I should wish to preface the statement of my disagreements from Dr. Keeling, which in any case I submit in the spirit of dialectic rather than by way of censure, by recording my admiration of his achievement, and also my conviction that the main body of his results is substantiated beyond dispute, and that not least when he is most original. Particularly compelling and suggestive are his distinction between experimental and methodical doubt (p. 80), the contrast between Descartes's "qualitative dualism" and his "existential pluralism" (p. 117); and his most acute and revealing discussion of "simple natures" (p. 68 ff.). His work, moreover, abounds in felicitous summary: for example, the deft formula, applied against Leibniz, that theism combined with monism inevitably turns to pantheism (p. 227). But there are several contentions of importance in which I cannot follow him, and as his exposition is splendidly homogeneous, they are for the most part interconnected.

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(i) Dr. Keeling complains (p. 236) that both Descartes and his commentators lay stress on his doctrine of "simple natures" while expounding his method, and ignore it when they come to deal with his metaphysics. There are quite good reasons for this procedure. As Dr. Keeling points out (it is a most important contribution to the subject), "the initial terms of a series are its 'absolute terms,' and these may or may not be also 'simple natures'" (p. 69); and as he further points out (pp. 90-91), the *cogito* is not the expression of a "simple nature" being composed (p. 94) of the simple nature of "existence" and the "thing which thinks." The *cogito*, on the other hand, is "an ultimate limit of formal analysis," in which thinking is recognized as the sort of attribute which belongs to, and characterizes, a substance. Now it is largely with substances and their characters that Descartes's metaphysics are concerned, and as, for example, the clear and distinct conceptions of mind and extension are none the less clear and distinct for our failure to analyse their constituent "simple natures," our tendency is to leave the question of simple natures behind us. Dr. Keeling's treatment seems to me to slur this change of emphasis, and thus, though he admirably stresses (p. 121, cf. p. 223) the supremacy of "metaphysics" over "physics" in Descartes's "philosophy," he does not quite bring out the discontinuity of the two sets of conceptions, or the conflict implied in it between mediaeval influences and those of seventeenth-century science.

(ii) There is a remarkable, and perhaps a significant, omission in Dr. Keeling's account of Descartes's proofs of the existence of God. In addition to the proof from the existence of the idea of God in the human mind, and the proof from the very nature of the idea of God, both of which Dr. Keeling describes, Descartes introduces, as an addendum to the former (*à quoi j'ajoutai*, . . . *Discours*, Adam et Tannery, VI. 34), what is really a third proof, which starts from the real existence of the thinking self. This proof Dr. Keeling completely omits, both in exposition (p. 107) and in criticism (pp. 240-245), presumably because he is pressed for space and does not regard it as significant. It has, however, this importance: that it alone passes from reality to reality and not from idea to reality, and thus presents as a relevant factor the qualitative continuity of the self which exists and the God whose existence is to be proved. The reason why I stress this point is that it is for me the only consistently acceptable indication in Descartes's own writings of a way of escape from the Cartesian circle. It is doubtless less interesting to Dr. Keeling for the reason that he does not believe in the Cartesian circle.

(iii) Dr. Keeling denies the circularity of the argument for the existence of God on the grounds (a) that the *cogito* is in itself a final criterion of truth, competent to deliver all ideas of equal clarity and distinctness from the wicked genius without the intervention of God, and (b) that the guarantee of God applies only to the *memory* of an intuition, and not to the truth of the intuition at the moment of its occurrence (pp. 245-248). The nerve of the whole argument is (b), for if (b) is not true (a) cannot be true either, even though Descartes may think it to be true, as he sometimes undoubtedly does. Now (b) is really not true. No doubt the guarantee of God is required for memory, as only under God are the moments of time continuous; and, further, in reply to objections on the score of circularity, this is the point which Descartes stresses, presumably because he sees, like Dr. Keeling, that if the guarantee were required only for memory there would be no circle. But Descartes also wrote: "If we did not know that everything which is true and real in us comes from a perfect and infinite being, however clear and distinct our ideas might be, we should have no reason to assure us that

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they had the perfection of being true" (*Discours*, A.T., VI., 39). That is to say, the guarantee of God is required to sustain the truth of clear and distinct ideas, not merely to vouch for their clarity and distinctness; and I cannot admit that this plain reading of a plain text rests on a "careless misinterpretation." But if this is so, argument (a), that the *cogito* alone suffices, is untenable, and the circle is closed; for unless clear and distinct conceptions are finally certified as true before they are relied on in the proofs of God's existence, we assume in our argument what only the conclusion of the argument can justify.

Descartes, however, does accept (a) in so many words: "Having noticed that there is nothing at all in the formula, 'I think, therefore I am,' to assure me that I am telling the truth, except that I see very clearly that in order to think it is necessary to be, I concluded that I could take it as a general rule that the things we conceive very clearly and very distinctly are all true" (*Discours*, A.T., VI. 32). If, then, we could afford to ignore his denial of (b), there would be no circle, and Dr. Keeling would be right without qualification. But such a simplification of the issue seems to me unwarranted, especially as the denial of (b) is bound up closely with Descartes's cherished doctrine that God is supreme over the eternal verities. There are, in fact, two inconsistent tendencies in Descartes's thought, of which Dr. Keeling recognizes only one; and the one which he overlooks, while it involves Descartes in the Cartesian circle, which he can then escape only by stressing the implicit apprehension of God in the *cogito*, has the advantage of being consistent with the extreme Cartesian theory of divine omnipotence, and of giving the wicked genius the extended trial which he surely deserves if he is to be invoked at all.

(iv) Dr. Keeling rightly observes (p. 57) that the boundary between metaphysics and theology is determined for Descartes by the mode in which propositions about God and the world are certificated. But he alludes so rarely to the details of Descartes's religious metaphysics that the reader might be forgiven for supposing that much more was made over from reason to revelation than is actually the case. Some of the discussions on the attributes of God (e.g., the distinction of the infinite from the indefinite, the insistence on God's "positive amplitude," and His supremacy over the eternal verities) are more closely affiliated to his philosophy as a whole than Dr. Keeling indicates.

This list of objections must appear somewhat churlish, so I hasten to affirm again my admiration of Dr. Keeling's cogency and originality, and to acknowledge, as a fellow recatcher, how much I owe to him.

A. BOYCE GIBSON

The Nature of Mathematics: A Critical Survey. By MAX BLACK. (International Library of Psychology and Philosophy. London: Kegan Paul, Trench Trübner & Co. 1933. Pp. xiv + 219. Price 10s. 6d.)

The two aims of Mr. Black's book on *The Nature of Mathematics*, to give a critical exposition of *Principia Mathematica* and to report and criticize the analysis of mathematics made by the formalist and intuitionist schools of mathematicians, are more adequately realized in the first instance than in the second. In general, the book does not carry out the task of philosophy, "to clarify by criticizing knowledge . . . organized into systems"; in nearly

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as deep-going fashion as the author's sense of the problems involved gives promise. We shall take up in order the three views discussed, beginning with the "logistic" thesis (A) of *Principia Mathematica* that pure mathematics is a branch of logic. Mr. Black traces the historical development of logic through to the stage when it became amenable for use in analysis of mathematics, and describes the attempts by Dedekind, Frege, Peano, and Whitehead and Russell to analyse the concepts of arithmetic and theory of functions. "Philosophic" analysis in its double aspect of analysing meanings, and, when necessary, altering these to avoid contradictions connected with the continuum, and "formal" analysis which replaces the concepts with a new set having the same interconnections, are suggested methods of approaching the important problems for the philosophy of mathematics still unsolved, namely, analyses of the notion of natural number and of the mathematical continuum (neither of which Mr. Black quite succeeds in treating adequately). The description of types of analysis is followed by a chapter on "logical" analysis, important in itself but not clearly related to what precedes it. Mr. Black's account states that "the materials for the actual practice of logical analysis are partly available in the propositional calculus and calculus of relations, . . ."¹ without carefully setting out to which parts of mathematical symbolism the described aims of logical analysis, namely, exhibition of structure, distinctions in significance, and multiplicity, are relevant. Instead, the further treatment of pure mathematics is of a subject-matter amenable to formal analysis. "The theorems of pure mathematics are true of any objects and relations which satisfy the axioms. . . . All that needs to be known of these objects is stated in the axioms. . . ."² One only wishes that some further account of the "objects" of such a formal system had been provided in explanation of the claim that mathematical symbols had a "reference"³ to a "subject-matter",³ and some hint at this point as to the ground for the important limitation set to the adequacy of formal analysis: (1) because natural numbers occur as constants in all axiom systems and are therefore to be understood in a different sense from terms occurring in special branches only; (2) because no complete axiom system can be provided for real numbers.

The propositional calculus, as foundation for the logistic construction of real number and prerequisite for the proof of the logistic thesis, Mr. Black rather awkwardly introduces as "the appropriate symbolism for all statements of how propositions can be deduced from other propositions by reason of their logical form, together with the appropriate rules for manipulating such statements. . . ."⁴ Important relations between propositions are described, the use of the entailment relation in the development of a calculus is discarded in favour of the implication relation (one needs here a description of the sort of difficulty which the former relation is claimed to introduce), and tautologies are supposedly defined. That the analysis of the latter is inadequate shows up forcibly in the analogous definition of tautologies in the algebra of propositional functions as "propositions . . . [which are] . . . true whatever propositional functions are substituted (just as the tautologies of the propositional calculus yielded true propositions for all values of p, q , etc.)."⁵ A clear and simple description of the principles of manipulation used in the propositional calculus of *Principia Mathematica* completes the account of this calculus, and then as a preliminary to an account of the calculus of propositional functions contained there, Mr. Black discusses the variables and functions occurring in mathematics, in analogy with which

¹ P. 36.

² Pp. 36, 38, respectively.

³ P. 37.

⁴ Pp. 42-43.

⁵ P. 66.

latter propositional functions are introduced into the logistic system. The various usages of variables are tabulated as "illustrative", "formal", "determinative", and "apparent", the first three being innovations on *Principia*. In particular, the determinative use seems important, but is unclear.

Definitions of mathematical functions, extensional and intensional, are then described, with mention of the difficulties in the former where correlations between infinite fields of variation are required. An intensional definition of a mathematical function which "regards the use of variables as fundamental"¹ is then formulated: "A symbol is . . . said to be a function of a second symbol if it contains the second symbol as part of itself, e.g., the symbol x^2 is a function of the symbol x ."² This calls for a further explanation of the notion of "containing". The asserted relevance of the type-token ambiguity of the word "function" to the various views of functions is left in obscurity, and one cannot gauge the seriousness of the criticism of Russell for considering the function x as a function of one argument instead of two, as Mr. Black holds.

From this point forward we have a critical exposition of the functional calculus of *Principia Mathematica*: (1) of the symbols (x) and ($\{x\}$), "descriptions", and "incomplete symbols"; (2) of the theory of types and the axiom of infinity; and (3) of the axiom of reducibility. In (1) the derivation of mathematical functions and classes from descriptive phrases as part of the logistic scheme is traced through, and the difficulty in the notion of identity used in analysing propositions in which descriptive phrases occur is remarked. It seems unfair, in light of the discussion in *Principia* of the contexts in which symbols for classes could be used in the relations "is a member of" and "contains," to hold as Mr. Black does, that limitations on its uses are not discussed. The claim that the ground for this supposed omission is "insufficient recognition of the distinction between formal and non-formal analysis"³ is obscure.

Views on the ontological status of classes have affected logistic developments: (1) so long as symbols for classes were considered to denote real things, by requiring an axiom asserting the infinity of such objects (to permit the definition of natural numbers); (2) when such symbols came to be considered meaningless in isolation, by shifting emphasis to the consistency of their use. Mr. Black suggests the possibility of the contradictoriness of their use unless the system proves, as *Principia Mathematica* does not, that in general (and not only in the cases where the theory of types has already been seen to be necessary) a contradiction is impossible. The difficulty of establishing this he considers due to the vagueness of the notion of propositional function, but the precise source of difficulty is not clear.

An interesting section tracing the historical development of the notions of continuity and real number shows how the logistic construction culminates in confusion of "types" in certain general theorems about collections of real numbers defined by Dedekindian section. Discussion of the different kinds of logistico-mathematical contradictions and their solution through limiting the field of variation of the variable concerned follows. Mr. Black criticizes the attempt in *Principia* to remedy the inadequacy of the theory of types by the introduction of a hierarchy of orders among functions of the same type, and suggests as an alternative to the latter an alteration in the conception of propositional function in accordance with the intensional definition given above. But it remains obscure how this, as is claimed, ensures absence of circularity.

¹ P. 56.

² P. 57.

³ P. 73.

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In forbidding the treatment of symbols of different types as though they had the same type in such cases as the proof of a least upper bound to an aggregate of real numbers, the theory of types makes the proof impossible without a supplementary axiom asserting the existence of a propositional function of lower type to which the given function is formally equivalent. As Mr. Black points out, previous difficulties over the meaning of "existence of real numbers," seemingly eliminated by Russell's construction of real numbers from the rationals (as against Dedekind's "postulation" of them) recur now over the existence of a propositional function asserted by the above formulated axiom of reducibility. He has in an interesting analysis shown that if the existence of the real numbers is to be secured, this axiom must assert the existence of a non-denumerable infinity of propositional functions, and the axiom of infinity, in securing the existence of the integers, a denumerable infinity. A suggested means of eliminating the theory of types is the employment of symbols themselves *showing* how such symbols may be combined, *e.g.*, a system of wooden rings (for propositional functions) showing that no ring of given radius could fit into another of the same or lesser radius (functions of the same or lower type). Similar considerations are tentatively suggested for the elimination of the axiom of infinity, though the way of effecting this is not clear. The axiom of reducibility, however, as yet defies elimination. And the proofs of Ramsey and Waismann that it is a contingent proposition are held to be fallacious, and its logistic derivation is as yet unaccomplished.

The conclusions drawn concerning the logistic system in *Principia Mathematica* are: (1) that a distinction between the philosophic and systematic (non-formal and formal) aspects of the calculus is necessary. In the former aspects symbols are used as words with meanings, but the calculus is to be developed formally, using symbols as "substitute signs"¹ without meaning. This involves discarding the view in *Principia* that certain formulae are primitive, and in consequence (2) that the logistic notion of deducing mathematics from logic must be abandoned. The relation of mathematics to logic is that in its systematic aspect mathematics must be used in the latter's development. In its philosophic aspect mathematics is "the syntax of all organized systems [and logic] the syntax of possible states of affairs".² This thesis would bear further elucidation. (3) That the axiom of reducibility in its assertion of existence is to be considered a meta-mathematical statement that the addition of a new symbol will not produce contradiction.

(B) The formalist view of mathematics is that it is concerned with the structural properties of symbols independent of their meaning, at any rate that its theorems have their meaning only in exhibiting the structure of indeterminate systems. Meaningful statements about these systems belong to "meta-mathematics". This view leaves unexplained the nature of the initial axioms and the reason for their choice. If the interpretation of the "ideal elements" which occur in these is to be ignored, a meta-mathematical proof of their consistency must be provided. With Gödel's proof that any proof of the non-contradictoriness of the entire calculus of functions itself leads to a contradiction, the hope of complete formalization seems to collapse.

(C) The clarity and simplicity of this too brief section on formalism is rather offset by the mistaken emphasis one feels to be present in the exposition of the intuitionist view. As an *attitude* toward mathematics ("dynamic" as against "static") and as an analysis of social origins of

¹ P. 142.

P. 144.

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mathematics, one feels that considerations are stressed which, in formalist language, describe neither mathematics nor meta-mathematics but something several removes from both. Certainly the responsibility for this lies originally with Brouwer, but one wishes that less space had been devoted to the "basic intuition", which is claimed to generate the natural numbers, and more to the actual demands *within* mathematics supposedly actuated by it, e.g., that the objects denoted by the subjects of general and existential statements be "constructible" if the latter are to be properly significant, that argument in accordance with the law of excluded mean is sometimes impracticable, that the integers cannot be formally grounded, that certain processes and axioms in the theory of point sets and the theory of transfinite ordinals and cardinals must be abandoned. In the history of intuitionism which Mr. Black gives, discussion of such strictly mathematical considerations does appear. The relationship of Brouwer's views to Kant's, in the grounding of the natural number series on the "basal intuition" of the multiplicity of the intervals of time, stands in need of further elucidation from Brouwer and criticism from Mr. Black. The latter holds this view to involve that mathematical judgments are synthetic and *a priori*, but such a claim is obscure in general. It is important to see, as Mr. Black has done, that Brouwer's "denial" of the law of excluded mean is not properly a denial, but expresses a requirement that mathematical statements shall have a clear meaning guaranteed by the constructibility of the concepts about which the statements are made. But exactly what constitutes constructibility, what meaning for general and existential statements is secured thereby, how this meaning is bound up with a finite method of verification—all such underlying questions are left almost untouched. Accounts of the intuitionist construction of a real number as an arbitrary choice-sequence, the denial of significance to general statements about the continuum (constructed from such choice sequences), and illustrations of propositions in the position of being neither true nor false are suggestive; but no adequate treatment of them throws light on the above questions. Mr. Black has succeeded in providing a simple and clear summary of Heyting's intuitionist calculus of logic (in which $\neg \neg a \supset a$ cannot be proved from the axioms nor the symbols (x) and $(\exists x)$ defined in terms of each other) and of the difficult view of sets. One could wish, however, that the way in which sets are constructed precludes the classical axiom of inclusion and thereby Burali-Forti's contradiction had been made a bit clearer; and also precisely how the denumerably infinite cardinal \aleph , the number of any set whose ordinal is ω , can be accepted on the intuitionist view as having a definite meaning, and why, if so much is admitted, a cardinal number corresponding to a denumerably infinite set of denumerably infinite ordinals to which a new denumerably infinite ordinal may always be assigned, cannot also be admitted. But for students without great knowledge of the subjects treated in this book, and for whom the book was intended, the broad analysis given is on the whole appropriate.

ALICE AMBROSE.

Religion and Theism. By CLEMENT C. J. WEBB, F.R.A. (London: George Allen & Unwin Ltd. 1934. 1p. 160. Price 4s. 6d. net.)

This volume consists of "the Forwood Lectures delivered at Liverpool University, 1933, together with a chapter on 'The Psychological Accounts of the Origin of Belief in God.' " It has all the qualities of lucid and attractive

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style, orderly arrangement, consistent argument, and assured conviction which one has learned to expect from the author.

The four Forwood Lectures deal with the relation of Religion and Theism, and the added chapter which follows the third lecture, though not part of the original argument, is quite relevant to it and consistent with it. Paradoxical as the phrase, "a religion without God," sounds, the author in the first chapter admits the possibility of a religious attitude to the world and life which stops short of any belief in God, and cites Buddhism in its earlier form, Confucianism, and the piety of Spinoza as instances. What is common to these instances and theistic faiths is provisionally described by him as *ultimacy* and *intimacy*, the inmost life of man relates itself to what is recognized as the inmost reality even if not called God; but this is a divorce of two elements usually united, the *subjective* fact of religion, the *objective* fact of God, the second not being an inference from the first but the content of it. Man apprehends God in religion, and does not infer His existence from it; but the apprehension of some sort of reality may persist, even when the content becomes indefinite. Theism, as a philosophical doctrine about God, may be held even where no religion corresponds, and so religion may survive even where theism has been abandoned.

The second lecture deals with Naturalism as a religion without Theism, and mainly consists of an examination of Professor Julian Huxley's *Religion without Revelation*. Its intentions may be stated in the author's own words: "I shall attempt in my following remarks to show (1) that Professor Huxley's own account of religious experience rather suggests a theistic background than is intrinsically inconsistent with it; (2) that his contrary belief is based upon a misapprehension of what is meant by Theism as a philosophical theory; and (3) that the 'Humanism,' as we may call it--although Professor Huxley does not use the word, and although his objections to Theism are based rather upon its supposed incongruity with our knowledge of Nature than upon its alleged incompatibility with the dignity of Man--this Humanism, which is implied in his own alternative theory of the nature of religious experience, is itself by no means easily reconcilable with his own account of that experience, or with his general philosophical position" (pp. 41-42). In my judgment the intention is excellently fulfilled.

In the third lecture the author turns to Humanism as represented by Mr. Walter Lippmann's *Preface to Ethics* and the *Ethics* of Professor Nicolai Hartmann. Of the first he says that it "is the work of an American author who reflects a mood of the moment without, I venture to think, evincing either an adequate apprehension of the difficulties inherent in the position which he defends, or such knowledge of what has in the past been thought upon the subject of his choice as might have emancipated him from what may perhaps be called without offence a journalistic pride in his modernity." Of the second he says that it "is, on the other hand, a highly important contribution to the literature of moral philosophy, combining learning with originality and acute criticism with genuine insight into moral experience" (pp. 60-61). His judgment of the former author commands my assent; as regards the latter, he argues that his rejection of Christian theism is due to an inconsistency in not recognizing that the 'eternal values' of reverence and gratitude he recognizes demand a personal God as their object (p. 74), and to a misunderstanding of what Christian theism is, and its consistency with an ethical view of the world (p. 75). On page 80 there is an obvious misprint, *majority* for *majesty*. The inserted chapter need not detain us, as it covers familiar ground; it is an acute criticism of the views of Leuba and Jung.

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The fourth lecture which then follows is a vindication of theism. The argument is thus summarized by the author himself: "I shall, then, only endeavour to suggest that, the religious consciousness being taken as a normal feature of human life, the interpretation thereof as a consciousness of the presence of a Being with whom what we may naturally call personal relations are possible is not only the most obvious interpretation but also one which there is no necessity laid upon us to reject on either of the two main grounds which we have seen to underlie current criticisms of theistic language and doctrine. On the other hand, I am convinced that neither of the suggested alternatives, a religion of 'cosmic emotion,' or a religion of what may be called in a general way 'humanism'—though this may take more than one form—can so well satisfy as does Theism the actual demands of the religious consciousness in its maturer forms" (p. 131). The author does succeed in showing that a properly understood theism, in which the immediate object of the religious consciousness, God Himself, has been intelligibly related by reason to the world and life is not inconsistent with either the interpretation of the world to which science leads or the position of significance which humanism assigns to man, and that it is in such a personal relation to that personal object that the needs of the religious consciousness are met, as they cannot be in any substitution for God of the universe itself or of humanity within it. For the misunderstanding of theism by naturalism and humanism, I may add, the opponents of theism must bear some of the blame, as they direct their criticism against popular misconceptions rather than competent expositions of Theism; and the Church must share some of that blame so far as it preserves and diffuses inadequate and superseded representations of the belief in God. It is a tragedy that through mistakes on either side, insufficiently appreciative scrutiny of the conception Theism offers and insufficiently critical presentation, any believers in religion should be denied the full satisfaction which belief in God can offer. The author deserves the gratitude of all who desire this conflict to be closed for his candid and considerate *eirenikon*.

ALFRED E. GARVIE.

Idealistic Logic: A Study of its Aim, Method, and Achievement. By C. R. MORRIS, M.A. (London: Macmillan & Co., Ltd. 1933. Pp. x + 338. Price 12s. 6d.)

This is a useful and timely book. Mr. Morris is in sympathy with the aim of Idealistic logic, but he is not blind to some of its deficiencies, and, following Cook-Wilson, he has much to say of the inadequacy of its method and achievements.

No one to-day would agree with Kant's famous statement, namely, "Since Aristotle, Logic has not had to retract a single step and to the present day has not been able to make one step in advance." During the last hundred and fifty years two widely opposed conceptions of the nature of logic—each somewhat unfortunately dubbed "modern logic"—have been developed; Idealistic logic and mathematical, or symbolic, logic. Whilst the germ of the latter may be found in the logical doctrines of Aristotle himself, the former marks a sharp reaction against the traditional logic, a reaction initiated by Kant, whom Mr. Morris regards as "the founder of Idealistic logic."

Mr. Morris agrees with the Idealists in regarding logic as the theory of the forms of thought. "Logic," he says, "seeks to discover certain forms within the process of experience determining the structure of that experience"

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(p. 317). He attempts to distinguish clearly between the province of logic and that of psychology, whilst at the same time insisting that "it is vital to the Idealistic logic to maintain that there is only one experience, and that all experience is one. Unless this is the case, logic, arguing as it does from the possibility of unity, has no method left to it, and therefore no existence. Logic cannot allow that there are two *kinds* of real experiences: thinking or apprehending, which it is the province of logic to investigate, and other experiences, such as imagining or dreaming, on which empirical psychology may try its hand" (p. 319). Logic and psychology are held to examine "different *aspects* of one and the same experience." It is from this point of view that Mr. Morris considers the deficiencies of pre-Kantian logic.

After two brief introductory chapters dealing respectively with the Aim and the Method of Logic, Mr. Morris gives an extremely good account of the traditional logic as derived from Socrates, Plato, and Aristotle. He suggests that "Aristotle caught a theory of Plato's at a moment of arrested development, as it were, and perpetuated it in essentials in a logic which no subsequent philosopher for two thousand years felt the necessity of criticizing in its fundamentals" (p. 35). This theory is that the act of knowing is always the recognizing of a universal in a particular. Hence the traditional logic laid stress upon the search for definitions, and was led to regard every statement as asserting an attribute of a subject. Closely associated with this is the doctrine that all thinking is syllogistic. Thus thought was taken to be "*deductive*, in the sense of drawing out conclusions from simple, general, true premisses" (p. 76). Mr. Morris contends that Hume tacitly accepted this view and was thus forced to become a sceptic since he could not find the required fundamental first principle or premiss. The traditional logic was fashioned to fit the theory of knowledge put forward by Socrates and Plato and handed on by Aristotle; it does not fit the Idealist theory of knowledge, since the Idealist regards thinking as discursive, denies that any judgment can be incorrigible, and insists that the mind is spontaneously active in producing a systematic unity. Mr. Morris recognizes the difficulty of explaining how mind can be thus spontaneously active and at the same time capable of knowing a world independent, in some sense, of the thinker. He has many illuminating things to say about Kant's theory of judgment (Chapter VI) and about the transcendental unity of apperception (Chapter VII). He gives a useful account of inference in the Idealistic logic (Chapter IX) and an interesting criticism of the coherence theory of truth (Chapter X).

The grounds of Mr. Morris's own dissatisfaction with the Idealistic logic are set forth in two chapters (XII and XIII) dealing with the "reactionary criticism" of Cook-Wilson. He argues that Idealistic logic, taking its starting-point from Kant, has analysed the actual operations of thought in physics, but has reached conclusions concerning the necessary forms of thought which are not in conformity with the thinking exemplified in non-mathematical sciences such as biology. In particular, Idealistic logic must be criticized for leaving unexplained the element of immediacy in knowledge. "The arguments of the Idealistic logic," Mr. Morris says, "are not competent to refute the contention that there is an element of immediacy in knowledge, so long as it is not maintained that the faculty of immediacy can of itself alone contribute *statements* which are pure statements of knowledge, carrying the guarantee of immediate apprehension" (p. 314). His conclusion is that the large claims of Idealistic logic to establish *a priori* how the character of experience is determined by the forms of thought must be abandoned. He maintains that its achievement lies in its having provided a defence against the scepticism of Hume, which scepticism, so Mr. Morris seems to believe, was the inevitable

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outcome of the traditional logic and the theory of knowledge upon which that logic rested. This contention cannot, in the opinion of the present reviewer, be admitted. But every logician should be grateful to Mr. Morris for his clear and interesting presentation of the Idealistic attitude to those problems which are traditionally regarded as constituting the subject-matter of logic.

L. SUSAN STEBBING.

Determinism, Indeterminism, and Libertarianism. By C. D. BROAD, M.A., Litt.D. (Cambridge: at the University Press. 1934. Pp. 48. Price 2s. 6d. net.)

This pamphlet constitutes the inaugural lecture given by Professor Broad on his appointment to the Chair of Moral Philosophy at Cambridge. He has chosen as his subject the timeworn but still acute problem of moral freedom, and while he does not claim to provide a solution for it he states the problem in a way which will make it much clearer to many readers,—I do not say "to all" simply because the same way of statement is not likely to suit everybody, and the analytic, formal way common at Cambridge, while providing perhaps the best possible method for very many readers, may somewhat repel and mystify others. When I have said this I have said that the pamphlet has done as much as any single discussion of the problem is likely to do, especially when confined to 48 short pages. It is well worthy of the reputation of the author and of his previous works, and ought to be read by all serious students of the problem.

Professor Broad makes it clear that the question is not whether "ought" entails "can," for that it does so *in some sense* is universally admitted,—a point often forgotten by indeterminists,—but *what* sense of "can" it entails. (In discussing this problem "ought" itself is throughout used in the sense in which it entails moral responsibility, but on pp. 21–24 there is a most illuminating account of other senses of "ought.") Again, it is generally admitted that it can never be true that I ought to have acted differently from the way in which I did act where it is the case that the action in fact performed would have taken place however strongly I had willed not to perform it, as, e.g., in a case of really uncontrollable sneezing. In this sense, as the author points out, "ought" clearly entails "can." But suppose, although I could have avoided doing it *if* I had willed sufficiently strongly, I could not at the time have willed as strongly as that? In that case again Professor Broad is almost certain that it could not be true that I "ought" to have acted differently from the way in which I did act. Nor, he urges, is the difficulty removed by saying that I should have then willed otherwise than I did if my volitions on previous occasions had been different from what they were in fact. Consequently he concludes that "could" in the sense in which it is entailed by "ought" cannot be reduced to "would have if." While this seems clearly true, I am not altogether satisfied with Professor Broad's assumption that the determinist really must analyse "could" as "would have if." Might not the latter, while denying that a different action was ever possible if you take all conditions into account, hold that it was possible relatively to certain conditions (*i.e.* all the conditions except some of the psychological ones), and effect the analysis in terms of this relative possibility? He might thus say, "A could have acted differently" means "a different action would have been possible though all conditions except A's state of will remained the same." In that case "I could have willed harder than I did" would become "it would have been possible

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for me to will harder though all conditions except my immediately precedent state of will remained the same," which may well be true according to many forms of determinism. There would still be cases in which a person wills with the maximum degree of strength compatible with other conditions, and other cases where he does not; and in the latter cases he might still perhaps be held to be morally responsible despite determinism if a wrong action occurred through his not having willed more strongly, but not in the former. Again, some determinists, *e.g.*, I think, Locke, would say that the question whether a man could have willed otherwise than he did is meaningless because it implies that a man can will to will, which is impossible, and that therefore the distinction made by Professor Broad between, *e.g.*, the man who is just beginning to adopt the drug habit and the same man when his will has already been undermined by the drugs so that he "cannot" resist them, must be analysed in some different way.

Professor Broad then proceeds to analyse further the alternative "indeterminist" view, according to which the degree of the agent's "desire" (I am not clear why he now ceases to talk of "will" and starts talking about "desire") is not completely determined by the laws of nature and other facts about events, dispositions, and "background conditions." But he is inclined to think that, besides this negative condition of indeterminism, a second, positive condition is necessary if an action is to be morally obligatory, for otherwise the action would be a mere accident. The view which admits both negative and positive conditions he calls "Libertarianism," and defines as follows: "(i) Some (and it may be all) voluntary actions have a causal ancestor which contains as a cause-factor the putting-forth of an effort which is not completely determined in direction and intensity by occurrent causation. (ii) In such cases the direction and the intensity of the effort are completely determined by non-occurrent causation, in which the self or agent, taken as a substance or continuant, is the non-occurrent total cause." Against this view Professor Broad raises the objection that, if an event is to be determined at all, it must be at least partly determined by precedent events; but I should have liked him to discuss the reply that the advocate of "Libertarianism" need not claim that even the direction and intensity of the effort are *wholly* determined by the self, but only that they are *partly* so determined, and expressly point out the difficulties in this rejoinder. But there is so much for which to be thankful in this last pamphlet that it is perhaps ungrateful to ask for more.

A. C. EWING.

History and the Self: A Study in the Roots of History and the Relations of History and Ethics. By HILDA D. OAKELEY, M.A., D.Lit. (London: Williams & Norgate Ltd. 1934. Pp. 286. Price 10s. 6d. net.)

It is in accordance not only with the recent trend of speculative thought, but with the still more recent course of political events, that we should envisage the task and nature of philosophy historically, and that our most urgent problem should be the relation of the individual self to the supra-individual concepts of the nation, and of civilization, and of reality itself. Dr. Hilda Oakeley states that she was urged to the writing of her book by "an intense impression of the paradox of our contrasting attitudes in historical and in ethical interest and judgments," and by dissatisfaction with the historical doctrine of the Hegelian tradition. That, presumably, was before the triumph of Hitlerism in Germany, which has provided most of us with a still stronger 'practical argument' against the submergence of individual

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personality in the Idea. It is a prime merit of Dr. Oakeley's volume that one feels this sense of vital issues underlying the course of her argument.

She starts by making pluralism axiomatic. The experience of the individual is the primary material of history, and the bases of knowledge and ethics are in the recognition of the *Thou*, over against the *I*. "An idealistic interpretation (of history), far from implying, is incompatible with monism." But how is this plurality of individual selves to be reconciled with the unity of history, a unity which the very term 'history' seems to postulate? The question is tackled on the several planes of epistemology, ontology, and ethics. On the first plane she distinguishes the self as subject, which, she declares, cannot be known directly, from the self as object of knowledge; and goes on to emphasize the limitations and defects of our historical knowledge, such as the loss of the actual experience of past individuals, which is history in the primary sense; the relativity of the categories of objective history (race, nations, institutions) which we substitute for the actual individual or event; the animistic attribution of personality to the non-human elements in history. An example of this animism she finds in Croce's identification of the Spirit with history. Turning then to the 'substance of history' she discusses the relation of personal activity and purpose to the blind factor of chance, and to the life of nations, institutions, and 'historical forces.' Her conclusion is that "the blind factors in human history may partly proceed from the minds of men themselves," and that "if there could be banished from the process of events all that we have discussed under chance . . . there remain in the very sanctuary of history the creative mind itself, possible sources of impediment to human progress." Individual freedom she assumes to be of the very nature of personality; but (she argues) without some transcendent principle history loses its meaning, and our freedom is of no avail. This principle she finds, though recognizing that all ethical systems are historically relative, and that the Platonic type of ethical objectivity involves a kind of animistic personification, "in the idea of a future united with that of the creativity of selves which lends it its value." "In the illimitable future . . . the dualism inseparable from history would not be eliminated, but . . . its unfavourable effects might be incalculably diminished." This conclusion is supported by the postulation of a supreme person who is *not* equivalent to the All, and whose nature supplies "a necessary principle of order in our idea of history."

The book is written with sober fullness and good sense: there is no attempt at metaphysical subtlety or obscurity, and some interesting points are made. But I cannot help feeling that the argument as a whole is lacking in logical coherence, and this lack of clearness and coherence is reflected in the frequent clumsiness of her English style. It seems to me that Dr. Oakeley as a pluralist is still too much of a monist, and that a far more radical analysis of historical concepts is needed if the discussion is to escape verbalism and ambiguity. For instance, the word 'chance' has two opposite and contradictory senses according as it is contrasted with the abstract logical scheme of an *onlooker*, or with the individual purpose and foresight of an *agent*; and any argument which fails to analyse this distinction must fall to the ground in logical vagueness. Again, the claim that there must be a transcendent principle in history is surely to accept a postulate from which the whole system of Crocean monism necessarily follows. In general I think there is a failure adequately to distinguish the category of history as thought from the category of history as lived, or actuality. On the denial and the confusion of that distinction monism rests, and on the analysis of it pluralism must rest. Dr. Oakeley refers more than once to that great-hearted doer and thinker, Dr. Albert Schweitzer;

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but she does not notice the summarizing sentence of his autobiography: "To the question whether I am a pessimist or an optimist, I answer that my knowledge is pessimistic, but my willing and hoping are optimistic."

ADRIAN COATES.

Speech Disorders: A Psychological Study of the Various Defects of Speech. By SARAH STINCHFIELD, Ph.D. (London: Kegan Paul, Trench, Trübner & Co., Ltd. 1933. Pp. xii + 341. Price 15s.)

This book is a conglomerate of miscellaneous information, nomenclature, and statistics relating principally to the handling of Defective Speech in America.

Of its three hundred and twenty-four pages, the first twenty-four are devoted to a sort of general "talk" on the Speech of Infancy, then come about forty pages on the Common Speech Difficulties of Childhood, followed by ninety pages of descriptive pathology bristling with nomenclature, hopeless prognosis, and, naturally and sadly enough, very little either about cases or treatment.

That makes up half the book. Part II (157 pages) contains six chapters of miscellaneous statistics for the most part inconclusive even for America, and of doubtful relevance elsewhere.

The sketch outline of the book given above is sufficient to indicate that the sub-title is something of a misnomer. It is "various" enough, but it is not a psychological study.

Nevertheless, Miss Stinchfield's general principles, as far as one can be sure about them, are sound. Her fundamental general description of language as a mode of behaviour shows the right attitude and is in harmony for instance with the views of Professor Karl Goldstein, who insists that the human organism functions as a whole, and that to treat a Speech Defect you have to treat the whole man. Many patients with speech defects are *malades*, and any treatment they are subjected to must be clinically above suspicion.

As Miss Stinchfield points out, the child's speech efforts are "socially motivated," and "an expression of his various activities or responses to environment." Speech has almost magical effects on those around him, and he either gets what he wants, or what he deserves. Words work wonders. Speech becomes integrated with the whole of his social behaviour and the expression of his social personality. Hence the importance of studying not merely the local disturbance of speech, but the whole patient in his habitat. This is particularly important in stammering or stuttering.

In this connection the author also asks the highly important question, "What is the child's native tongue?" but she apparently underestimates the importance of the speech habits formed before the age of seven. Speech it is true is dynamic, changing to serve changing needs, "subject to change without notice," but there remains the dialect of home, village, community, and class, closely correlated with the socio-economic organization in which the speaker functions in his various rôles. It is becoming increasingly clear that the democratization of the culture and speech of the upper classes by downward infiltration and progressive dilution, eventually reaches a stage when a sort of normal line has to be drawn and the whole wretched crop of defectives, deficient, and delinquents has to be reaped. It is also more than likely that a considerable amount of nervous strain or at any rate unhealthy reactions are caused by the impact of the native culture and speech with a more successful or alien culture. This is certainly true of "native" races, and probably also of the lower middle and more ambitious working classes who

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propose to make use of the "educational ladder." A great deal of emotional instability, cultural and linguistic sterility, widespread negative attitudes and cynicism must be put down to the downward democratization of national and imperial cultures.

And here some of the tables in Part II are suggestive. About one-third of the students in groups at Mount Holyoke College "expressed themselves as dissatisfied with their speech." They were asked to describe the chief characteristics of cultured speech and evaluate their own. They were asked such questions as: "Are you a leader in your social group?" "Have you ever felt inferior because of poor speech?" "Is your accent and pronunciation like that of most of your friends?" It is enlightening to consider the cultural background of such questions as these, and to imagine the sort of answers you might get from the products of our big public schools, from secondary school-boys in Bolton, Bradford, Burslem, and Bangor, from elementary school teachers, people in evening classes all over the country, and the pundits of culture democratization at the B.B.C. It is also significant that in the speech correction groups of two colleges more students came from the semi-professional classes than any other. In Hunter College 45 per cent. were of semi-professional and 55 per cent. skilled occupational origin—only 5 per cent. professional.

Miss Stinchfield finds it surprising that in the correction groups there should be more girls from homes with some pretensions to culture than from lower-class homes with no such pretension. It would appear to be a natural consequence. It can be an awful strain to have to look up to people, but it is some compensation to have people to look down upon. If you have nobody but a moron to look down on it's no good looking at the ladder. But with organized democratization of culture downwards you must beware of the dividing line; a whole army of "deficiency" specialists with highly systematized "deficiency" techniques have grown up on the frontiers. It is to be hoped we shall someday be able to do without them, as they are the scourge of all public education.

On a very much larger scale there is the lively interest we take in "backward" and "inferior" races, and quite recently the measure of "fitness" for citizenship has been found in nordicism, which means very little in itself but something quite definite when taken with its correlative opposite—the second-class citizen or subman.

There are many speech disorders which are not attributable to functional disturbances, but we know so little about the whole mechanism of speech, that the classificatory nomenclature of this book cannot be said to rest on or to correspond to any scientific systematized knowledge. These labels in "pathological" Greek are little more than convenient temporary trade names—rather like the abracadabra of the apothecary. For example, if you have a provincial or foreign accent, according to this American measure, you are not "normal," you are "suffering" from *Dysrhythmia barbaralalia*. Among the more unpleasant vocal disturbances you will recognize the virago in *paraphonia amazonica*, and the lemon-coloured voice in the *eunochoidia* type. And then there are the very prevalent complaints of *polylogia* or *logorrhoea*.

At the present moment there is a semi-official committee deliberating on Speech Training and Speech Defects. It is to be hoped they will realize, with Miss Stinchfield, that some of these disorders "may appear for the first time in early childhood, or in later childhood, or in adolescence, but the majority of speech disturbances of remedial type appear in childhood."

It is mainly a social and educational problem. Of the many Speech Disorders in which the prognosis is definitely bad, there is little if anything to be said except sympathy and mercy.

This is a very American book. In Part II there are chapter headings like

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"Personality Schedules" and "Trait Inventory." And—as one has come to expect in this twentieth century with its "A1-C3" problem—there are speech tests.

And yet, in spite of its special American appeal, the book is a valuable one. Speech disorders are described, and the importance of regarding them as disturbances of personality with due regard to heredity and environment, fully recognized. Every Speech Teacher should have it, and it is to be hoped in the near future he will be better qualified to assess its real value and use it with discretion.

J. R. FIRTH.

God or Man? A Study of the Value of God to Man. By JAMES H. LEUBA.
(London: Kegan Paul, Trench, Trübner & Co. 1934. Pp. xii + 338.
Price 10s. 6d.)

Professor Leuba is concerned (and who is not?) for the moral, and incidentally for the social and physical betterment of man, and he feels that the chief hindrance lies in the pre-occupation of men with Gods. Instead of resorting to psychologists for psycho-therapy, they continue to pour out time, money, and strength in seeking benefits from the "God of the religions." Now for this God, conceived as a being with whom social relationships are sought and enjoyed, there is—the Professor holds—no shred of evidence: a vaguely defined "Life Urge" somehow involved in man's ideals he can concede as scientifically respectable, and hence as perhaps existing. The benefits, however, are admittedly forthcoming, but they are really due to men, and not to God; they might more advantageously and less expensively be had from Professor Leuba. To this disadvantage must be added grave positive evils attendant upon religion as such which far outweigh its benefits. Religion (we are informed) opposes or neglects knowledge, encourages prejudice and hypocrisy, saps self-determination and self-help: notably (a chapter being devoted to this) it spreads, "False teaching concerning the source of the virtues." In the past religion was useful, and Professor Leuba is not ungrateful for having been brought up in it, but he judges that it should now give way to clinics and (perhaps) ethical societies.

The author eschews ultimate questions (while by suggestion dealing with them) in order to remain "within the range of human knowledge," but he does not seriously consider whether or not this range is truly taken. So far as there is an argument running through the book it is this: men have taken themselves to be healed, strengthened, inspired by God, but scientific psychology has shown that these effects are explicable (and repeatable) in terms of normal human psychic forces; therefore belief in the existence of God is very probably false and incidentally a nuisance.

Since Professor Leuba quotes (p. 199) a Lambeth Committee as conceding the factual position of his book, namely, that "spiritual healing" is not an ecclesiastical monopoly, the reviewer is moved to wonder at his uncritical confidence concerning the interpretation he builds upon these facts.

As against some excessive erotic mysticism and much prevailing anthropocentrism in religion his strictures are timely. But religion is essentially *theocentric*. It is not founded in the satisfaction of man's needs, except in so far as it satisfies what the author describes as the "appalling desire" for God for His own sake. Thus the utilitarian attack upon religion is wide of the mark. No religious man would think of asking Professor Leuba's question,

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"Of what value is God to man?" The question which puzzles him is, "Of what value is man to God?"

The Christian doctrines of the Incarnation and the Holy Trinity are shortly dubbed "all that abracadabra." Perhaps it is not astonishing that one able to judge thus can also see the Church as "drunk with lust for power" (p. 328) simply because Pope Gregory VIII "claimed the right of sitting in judgment upon the conduct of kings . . ." when what the Pope was rightly claiming—namely, that man's spiritual life is the end of his civil life—Professor Leuba, in his own terms, would assuredly insist upon.

The author contrasts Christianity with "The noble and simple religion of Christ." Has he noticed how radically non-utilitarian Christ's religion is? or how deeply it is rooted in the religion of Israel? or how essential to it is communion with God? In sum, has he noticed that the religion he admires involves the denial of what he asserts, the assertion of what he denies?

RALPH E. STEDMAN.

Counter Attack from the East. By C. E. M. JOAD. (London: George Allen & Unwin Ltd. 1933. Pp. 269. Price 7s. 6d.)

The attraction which military metaphors have for so many ardent votaries of peace has led Mr. Joad to misname his latest book. It should have been rather "Sanity from the East," or even "Salvation from the East." For he is concerned to argue that what contemporary Western civilization needs, if it is to escape from its profound inner malaise, from its futilities and frustrations, and the jeopardy into which they have brought the world, is the recovery of the sense of values which can only (it seems to be implied) be learned from the philosophy of Hinduism as expounded by Professor Radhakrishnan. In this remarkable personality and gifted thinker Mr. Joad sees a "liaison officer" uniquely fitted to interpret the West and the East to each other, and with a message of hope which the West cannot afford to ignore. Apart from a vigorous prologue and epilogue in which the moral is applied, the whole book is occupied with expounding Radhakrishnan's philosophy, and draws copiously upon his writings, especially the Hibbert Lectures, *An Idealist View of Life*. Out of some 160 citations from Radhakrishnan nearly a hundred are from this book.

Mr. Joad remarks that "it is a defect of his method that the reader is sometimes not as clear as he would like to be, whether Radhakrishnan is speaking his own mind or revealing the mind of others." The same criticism must certainly be made upon this book. Occasionally the author interposes an explicit caveat or frank note of dissent. More often we are left rather vague as to how far he accepts the contentions he states with such lucidity. In the main, however, he clearly does accept much of the Indian thinker's philosophy as of particular importance and relevance to-day.

Many readers will feel that Mr. Joad has exaggerated, if not the importance, at any rate the novelty of his discovery. That Radhakrishnan's philosophy is original in the best sense of the word, that is, a piece of thinking at first hand, it would be an impertinence to question. But that many of the positions he has reached, and which are here proclaimed as a gospel for our times, are new to Western thought even in the expressions that clothe them is far from obvious. The symbolic nature of religious creeds; the reconciliation of God and the Absolute; the treatment of the problem of evil and the problem of freedom; the validity in principle of religious knowledge; on these and other

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matters Mr. Joad surely did not need to go so far east in order to find the doctrines he so much appreciates.

What is more, he is most grotesquely unfair to the philosophy of the Christian religion, which he appears indeed never to have attempted to study sympathetically (*e.g.* see two foolish comments, pp. 91, 208). Nor for that matter is he fair to Christianity as a whole, which seems to mean to him chiefly the Inquisition and the wars of religion. It is very different with Hinduism. Apart from a few perfunctory references to its perverted and debased features, we are asked to judge it from the exalted eclectic idealism of Radhakrishnan. Western sectarian intolerance is then effectively, and easily, contrasted with "the Hindu theory that every human being, every group, and every nation has an individuality worthy of reverence." When we look eastwards we are, it appears, to ignore such practical comments upon this theory as temple prostitution and untouchability, just as when we look at the West we are to ignore the interpretation of the meaning of Christianity of a Francis or a John Woolman. But in truth there is something meretricious about this sharp contrast of West and East. Mr. Joad, obsessed with contemporary tendencies, simplifies his chiaroscuro altogether too drastically. Monism since the time of Parmenides has been as native to the West as pluralism; and very naturally, for it expresses one of the most fundamental human needs. It is certainly *not* "obvious" (p. 142) that the affirmation of an unchangeable reality "comes from the East."

On the whole the book does more credit to the author's enthusiasm than to his judgment. It seems to have been written in a hurry and contains some hasty comments which the author would probably admit were inaccurate, *e.g.* the linking of "theories of the Alexander or Bergson type," on p. 142, or the reference to Plato, on p. 136. Yet, when all is said, the author is, if he will pardon a figure of speech so flagrantly Christian, upon the side of the angels. And for his pungent comments upon "the need of the West" many readers will be grateful.

J. W. HARVEY.

Goldsworthy Lowes Dickinson. By E. M. FORSTER. (London: E. Arnold & Co. 1934. Pp. x + 277. Price 10s. 6d.)

Mr. Forster has produced a singularly interesting portrait of his friend, one of the most considerable thinkers and writers of the age. In what sense was he a philosopher? Throughout his life, inspired first by Shelley, then by Plato and Goethe, he brooded over what may be termed the deeper problems of man in the universe, diving into them by various approaches, the ordered reasoning of his friend McTaggart, the mysticism of Plotinus, the values disclosed by poetry, music, and painting, with more timid glances at the sciences of physics and psychology. He never attained, or believed in, the possibility of winning a philosophic system, was not concerned with the absolute or ultimates. He realized himself as a questioner in a changing world, unlikely to get full satisfaction to questions the validity of which was always qualified by the limitations of his nature and understanding. When young "I thought that there must be some way of reaching ultimate truths (or perhaps I should say ultimate experience) by some short cut. I suppose the principal thing that happened to me, in the course of my life, was the disappearance of this idea" (p. 229). "The world is incomprehensible, and must remain so to us animalcules, though the best thing about it is our shots to comprehend it" (p. 231).

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It is significant that most of his early writings as a young Cambridge Don were poems, usually sonnets. For this meant that imagination, kindled by emotion, was to him a better mode of self-realization than reasoning in getting at the values of life. But he was capable of close, clear thinking, with a wonderful vigour and beauty of expression in the fields of personal and social conduct, as illustrated in his dialogues in *The Meaning of Good*, *A Modern Symposium*, and *Justice and Liberty*.

But a deep concern (in the Quaker sense) for civilization drew him out of his donnish seclusion. *The Letters from John Chinaman* won him a wide acceptance as a critic, and his tours in America and in Asia opened new vistas of experience to his sensitive mind. He began to feel an obligation to turn his studies of history and political institutions to practical utility for the education of a wider public opinion. Though continuing to write on "The Greek View of Life" and on religious topics, he found himself drawn into the political field as new issues of Peace and Liberty came up. When the immediate shock of the War subsided, he set himself with courage and pertinacity to plan for the salvation of the world by means of a League of Nations. The so-called "Bryce scheme" for internationalism was mainly his production, and he lent his mind and pen for years to the furtherance of this policy, subordinating to it all other interests. His great book, *The International Anarchy, 1904-1914*, published in 1926, is the most powerful exposition of the deeper causes of the War that has appeared. In the last years of his life, he returned to Plato and Goethe, even putting Plato for the first time on "the wireless."

He had a free, rich, shy, but truly social nature, with great tolerance and a faith in the goodness and reasonability of man sufficient to warrant a belief in human progress.

J. A. HOBSON.

Religion and History. By JAMES CLARK McKERROW, M.B. (London: Longmans, Green & Co. 1934. Pp. ix + 193. Price 6s. net.)

The two essays which make up the volume do not fulfil the expectation which the title awakens, that there will be an adequate consideration of the influence of religion on history, or of history as a factor in religion; nor have they the close connection with one another that the words on the paper cover suggest: "Two essays, one dealing with religious history from a secular point of view, the other with secular history from a religious point of view." The first is a sociological study of the evolution of society in history, and religion is mentioned as one element in the evolution; the second is a theory, not original, for similar views have been before advanced, but eccentric, of the origin of Christianity; the first is decidedly the better, though much the shorter of the two, as it offers an interesting discussion of the *Principles of Sociology*. The author rejects the view of Sociology as a study of the relations of individuals in a society, and insists on the unity of society as an organism, a body, and a mind. He describes two types of social bodies, the *polities* (Greek) and the *economies* (the older empires); he recognizes that society has a "mental" aspect, which is not to be identified with its civilization. He maintains that in society there is an economic evolution, and that there is continuity in evolution. The economic evolution is towards a world-economy, a mutual dependence in this sphere of all nations, but on the mental side he does not expect an international evolution, but closes with a discussion of national economy. His attitude is that of naturalism; he recognizes

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causality, but not teleology. Changes simply "happen." Evolution produces persons and events, and not the reverse, and we should offer no judgment on them.

The second essay is entitled *Evolution in the Light of Religion*; but this title has no necessary relations with the contents. The thesis maintained is that there never was actually an Apostolic Age, that Christianity began between A.D. 70 and 135 in Gnostic Christianity, a blending of pagan philosophy with Jewish Messianism, that for the cultured the ideal Saviour sufficed, but for the simple folk belief in a historical personality was necessary; that Catholic Christianity emerged out of the Gnostic, but turned against it, and claimed a basis in an Apostolic Age. He maintains that Christ is "mythical," not an historical figure, that "modernist" criticism has not left much of the historical Jesus, that "whether Christian doctrine and legend crystallized about a real person of that name (Jesus) is a matter of some historical interest, but of no importance for Christianity whatever; a mere man cannot be the Saviour." "What is important for those who have the cause of religion, which is the cause of humanity, at heart, is the ever-increasing scepticism among the educated—and we are all educated now—as to the alleged historical basis of Christianity. The hungry sheep look up to hireling shepherds (pp. 88-89). This statement which offers the reason for the reconstruction of history which follows calls for comment. There is a large number of competent, responsible scholars who would deny the negative position of extreme modernism in regard to the historical Jesus; it is simply not true that there is "an ever-increasing scepticism among the educated," if among the educated are included all Christian scholars and thinkers; to describe the ministers of the Christian religion as "hirelings" is not evidence, but abuse, which discredits the writer himself. He expresses his concern for religion, and does on several occasions mention God; but on page 56 he omits from the quotation from Micah the words "with thy God," in view of the doubtful convenience of the fiction of a corporate religious consciousness in modern, as contrasted with ancient societies, and seems to regard theism as unnecessary. His theory cannot be combated in detail in the pages of *PHILOSOPHY*; but even were his theory not as arbitrary as it is, he does not show the competence of knowledge which would justify the confidence of judgment he allows himself; assumptions for the most part usurp the place of argument. His essay can claim no value as a contribution to the discussion of a subject of so great importance.

A. E. GARVIE.

Collected Papers of Charles Sanders Pierce. Vol. III. *Exact Logic* (Published Papers). Edited by CHARLES HARTSHORN and PAUL WEISS. (Cambridge, U.S.A.: Harvard University Press; London: Oxford University Press, Humphrey Milford. 1933. 1 p. xiv + 433. Price \$5; 24s. 6d. nett.)

These collected papers are concerned in the main with the logic of relations, the logic of mathematics, the devising of a suitable symbolism for dealing with both, and the ultimate analysis or philosophy of symbolism, mathematical proof, and the forms of facts.

Most of the book is now of mainly historical interest, showing how Pierce, starting with the work of Boole, "developed the logic of propositions, propositional functions, and the logic of relations, up to the point where these approximate to a calculus which is adequate to the actual deductive procedures exemplified by mathematics."¹

¹ Lewis and Langford, *Symbolic Logic*, p. 16.

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The editors' claim that Boole was one of the most original and prolific logicians of the nineteenth century is well substantiated; apart from the developments mentioned above, one is constantly surprised by remarks which anticipate the best modern work. See for example 20 on the logic of mathematics, and 361, 418, and 419 on the diagrammatic function of language.¹

Although Pierce accepts with an unquestioning *naïveté* characteristic of the symbolic logician "an ideal world of which the real world is but a fragment" (527), yet on the whole he is anxious to remove the superfluous; sometimes he believes symbols to illuminate more than they do (e.g. 444); but his faith is not blind (e.g. 515).

Pierce was not merely a man of great ability. He thought afresh. And it is worth reminding oneself at the present time that the study of first-rate and first-hand thinkers of the past is often very fruitful even when they were concerned with subjects in which advances have since been made.

Besides a table of contents and general index, the editors have provided a list of topics of historical interest and another list of topics of general interest. The latter should, I think, have included *Propositional Function* 420, 421, and *Material Implication* 374, 441 f. Pierce is illuminating on the propositional function and thus on the variable, though *Nature of the Variable* 94 is pretty useless. *Demonstrative Symbols and Heccities (particulars)* are mentioned in 361, 419, and 460. A more complete table of references to topics of general interest would have been welcome in view of the disjointed presentation entailed by the chronological order.

JOHN WISDOM.

Books received also:—

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- A. K. COOMARASWAMY. *A New Approach to the Vedas. An Essay in Translation and Exegesis*. London: Luzac & Co. 1933. Pp. ix + 116. 5s.
- W. McDUGALL, F.R.S. *Religion and the Sciences of Life*. London: Methuen & Co. 1934. Pp. xiii + 263. 8s. 6d.
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- J. C. GREGORY, B.Sc., F.I.C. *Combustion from Heracleitos to Lavoisier*. London: Edward Arnold & Co. 1934. Pp. vii + 231. 10s. 6d.
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¹ My references are throughout to the numbered paragraphs.

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- G. SPILLER. *The Ethical Movement in Great Britain. A Documentary History.* London: The Farleigh Press. 1934. Pp. 95.
- A *Bibliography of Aesthetics and of the Philosophy of the Fine Arts from 1900 to 1932.* Compiled by W. A. Hammond. (Revised edition.) New York: Longmans Green & Co. 1934. Pp. 205.
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- R. V. FELDMAN, M.A. (Preface by C. C. J. Webb.) *The Domain of Selfhood.* London: G. Allen & Unwin Ltd. 1934. Pp. 212. 10s. 6d.
- SIR HENRY LAMBERT, K.C.M.G., C.B., F.S.A. *The Nature of History.* London: Oxford University Press; Humphrey Milford. 1933. Pp. viii + 94. 5s.
- R. CARNAP (Tr. by M. Black). *The Unity of Science.* (Psyche Miniatures.) London: Kegan Paul, Trench, Trübner & Co. 1934. Pp. 101. 2s. 6d.
- II. A. WOLFSON. *The Philosophy of Spinoza. Unfolding the Latent Processes of his Reasoning.* Cambridge, Mass.: Harvard University Press. London: Oxford University Press; Humphrey Milford. 1934. Vol. I. Pp. xix + 440. Vol. II. Pp. xii + 424. \$7.50 (31s. 6d.) the two volumes.
- II. P. FAIRCHILD. *General Sociology.* New York: J. Wiley & Sons. London: Chapman & Hall Ltd. 1934. Pp. x + 633. 23s.
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THE BRITISH INSTITUTE OF PHILOSOPHY

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INSTITUTE NOTES

THE syllabus for the Session 1934-35 is in course of preparation, and copies will be sent to all members in September.

During the Session which has just closed members have again been privileged to listen to many distinguished lecturers in the various branches of philosophy. Both in regard to the Lecture Courses and Evening Meetings the Session has been successful.

The Annual General Meeting will be held on Wednesday, July 4th, at University Hall, 14, Gordon Square, London, W.C. 1, at 5.30 p.m. Short speeches will be made by the President, the Chairman of the Institute, and Professor John Macmurray.

The Editor begs leave to remind all interested in the work of the Institute that donations of any amount, to supplement the inadequate income from subscriptions, will be greatly appreciated by the Council of the Institute.

EIGHTH INTERNATIONAL CONGRESS OF PHILOSOPHY

The Eighth International Congress of Philosophy will be held this year at Prague in Czecho-Slovakia from 2nd to 7th September, as announced in *Mind* (July 1933) and in *Philosophy* (October 1933). Anyone desiring to attend should communicate with Professor Radl, Charles University, Prague, who will send him an official invitation and information regarding the proceedings.

In order to facilitate the work of the British Organizing Committee, those attending the Conference should also acquaint Professor J. H. Muirhead, at Dyke End, Rotherfield, Sussex, of their intention.

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OBJECTS OF THE INSTITUTE

The British Institute of Philosophy exists to bring leading exponents of various branches of Philosophy into direct contact with the general public, with the purpose of satisfying a need felt by many men and women in every walk of life for greater clearness and comprehensiveness of vision in human affairs.

With this broad educational purpose in view, the Institute—

- (1) Provides at suitable times in the day and evening courses of lectures by leading exponents in the more important subjects coming within the scope of Philosophy. All branches of Philosophy are represented—Ethics and Social Philosophy, the Philosophy of Law and of the Sciences, of the Fine Arts and of Religion, as well as Logic and Metaphysics and Psychology. These lectures are free to members.
- (2) Issues a quarterly philosophical Journal (free to members).
- (3) Proposes to form a philosophical Library.
- (4) Gives guidance and assistance to individuals in their philosophical reading.
- (5) Encourages research in Philosophy.
- (6) There are Local Centres of the Institute at Bangor, Cardiff, Liverpool, Manchester, Northumberland and Durham, and Sheffield.

Further information and forms of application for membership may be had on application to the Director of Studies, University Hall, 14 Gordon Square, London, W.C. 1.

[Suggested]

FORM OF BEQUEST

I bequeath to THE BRITISH INSTITUTE OF PHILOSOPHY the sum of free of duty, to be applied to the purposes of that Institute, and I declare that the receipt of the Honorary Secretary, or other proper officer for the time being of that Institute, shall be a sufficient discharge for the same.

PHILOSOPHY

THE JOURNAL OF THE BRITISH INSTITUTE OF PHILOSOPHY

VOL. IX No. 36.

OCTOBER 1934

CORRESPONDENCE

THE PRESENT NEED OF A PHILOSOPHY

MY DEAR EDITOR,

I hope things are not so bad as Sir Herbert Samuel seems to think. Humanity would be in a truly desperate plight if it had to say, "Stop thinking about everything except what is urgent." I cannot believe that our fate is as cruel as this.

It may very well be true that far too small a proportion of eminent contemporary philosophers write about the causes of our present social discontents, or about likely remedies for them. If so, and if these particular philosophers are incorrigible, it is pleasant to know that there is a promising field for others.

I confess I am not greatly impressed by the difficulty of explaining to earnest young men and women what "epistemology" would be at, although I admit the possibility that epistemologists may have talked themselves dry.

By "epistemology," however, Sir Herbert Samuel appears to mean the analysis of "conceptions," and I am unable to decide whether his argument is that there are no such entities as conceptions, or that, although there are conceptions, "good," "evil," "value," and "colour" are not conceptions but shams. In either case he appears to be professing to offer either a truer conception or a better analysis than the wicked philosophers who do not write about urgent sociological matters.

In general I should say that I hope there is a permanent need for philosophy, and that there will continue to be many philosophies, not one only.

Yours faithfully,
JOHN LAIRD.

ABERDEEN UNIVERSITY,
July 2, 1934.

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MY DEAR EDITOR,

I am very interested in the letters which have appeared in **PHILOSOPHY** about the present need of a philosophy. To my mind philosophy as conceived by the layman is too abstract to be intelligible, and too remote from the affairs of everyday life to be practical. Mr. Aldrich stated that too few men of affairs care about becoming philosophers. This is true only in the sense that they do not read the current works on philosophy, and the reason for that is that the current works are usually couched in a philosophical jargon which is unintelligible to those who have not had time to familiarize themselves with the philosophical classics. Yet all men of affairs are really philosophers, for without a philosophy of life one could not be a successful man of affairs. They may not consciously have formulated a philosophy, but inasmuch as they live according to certain ideals, they are practical philosophers.

I take it that philosophy aims at obtaining a coherent view of reality as a whole, in so far as that is possible with our limited knowledge, and further, that by knowing more about reality, we may understand better how to live. For surely the important thing in this life is rather to live it than to speculate metaphysically. (Of course metaphysical speculation is necessary in order to arrive at an idea of our purpose in life.)

I agree, too, with Lord Listowel's statement that the only life really worth living is a life resplendent with scientific truth, with religious vision, with moral and artistic beauty, and that reason and love must ultimately prevail wherever humans dwell. The aim of life, then, should be to turn our creative energy, the harnessing of which is the most satisfying thing in human experience, into true and beautiful channels.

R. G. Collingwood in *Speculum Mentis* states, "All thought exists for the sake of action," and I think that this should be the test of a true philosophy. What is the good of thoughts that cannot be acted upon, or of a philosophy which is thought out but not practised? This question must often occur to the layman who tries to read many modern philosophical works.

If I am right in thinking this, then it appears to follow that the world is in need of a philosophy thought out by our great men, and capable of being acted upon; moreover, presented to the lay-reader in simple language, so as to promote thought in him about life, and to help him in living it.

Yours sincerely,

HAROLD H. COOMBS.

BOXGROVE SCHOOL,
GUILDFORD, SURREY.

August 4, 1934.

SELF-EVIDENCE AND MATTER OF FACT¹

PROFESSOR G. F. STOUT

PART I

THE distinction tentatively drawn by Mr. Porteous at the last meeting of the Society between logical and causal necessity depends on the more general distinction between what is known or capable of being known as self-evident and what is known only as matter of fact. That there are three cows in a field is a matter of fact. That $1 + 2 = 3$ is self-evident and necessarily true (if it is true at all). So soon as the question is raised it is seen that there can be no alternative to its being true—otherwise it is not self-evident. But there is no necessity that a field should have cows in it, or that if it has they should be just three in number. Similarly, it does not seem self-evident that an unsupported stone must fall to the ground. Those therefore who hold that the fall of the stone is necessitated by causal conditions must, it would seem, be speaking of a different kind of necessity, that which Mr. Porteous calls causal. But what kind of necessity can this be? If it is not evident to us, what kind of right can we have to assert it? And yet can we possibly do without it?

A full discussion of this question must start from both ends. It must examine the nature and conditions of self-evidence and also the nature of causal relations and our knowledge of causal relations. What I shall be principally concerned with in the present paper is the nature of self-evidence in its distinction from matter of fact.

It is not open to doubt that matter-of-factness is different from self-evidence and that neither is ultimately reducible to the other. But it is another question whether either is ultimately separable from the other. My own position is that they are ultimately inseparable. There is no self-evidence which does not presuppose matter of fact; there is no matter of fact which does not self-evidently stand in relation to other matter of fact. It is the second of these propositions which will *prima facie* arouse most opposition. But as a necessary preliminary to dealing with it I must treat of the first.

Various accounts have been given of the nature of self-evidence. The simplest is that a proposition is self-evident when, in order to see that it is true, we have only to understand with sufficient fullness

¹ A paper read to the Scots Philosophical Club, May 26, 1934.

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and precision what is asserted in it, so that error can only arise where there is some confusion about what is meant. This will be accepted by everybody as a provisional definition. It is also very generally held that in order to apprehend self-evidence we need only consider what we mean, and that the question whether what we mean really exists is irrelevant. "Propositions of this kind," says Hume, "are discoverable by the mere operation of thought, without dependence on what is anywhere existent in the universe. Though there never were a circle or triangle in nature, the truths demonstrated by Euclid would for ever retain their certainty and evidence." Statements of this kind inevitably raise the question: What do we mean if we do not mean anything that really exists? One answer is that what is meant has being only for thought, that it is an "idea" in the Cartesian sense. I shall not spend time in discussing this view. When I say that a three-sided figure must have three angles, I certainly do not mean this assertion to refer to "ideas" in my head. Another answer is that self-evidence is concerned with universals taken as characters in abstraction from anything which they may characterize. But so far as a character characterizes nothing, it is not a character. On the same ground which warrants us in saying that there cannot be a square circle, we are equally justified in saying that there cannot be the *character* of being a square circle. Another answer with which I am more in sympathy is that of Leibniz. According to him the field of self-evident truth is the field of possibilities as distinct from real existence. Perfect circles and perfect straight lines need not really exist in nature; but they must be geometrically possible, if it is evidently true that a perfectly straight line can touch a perfect circle, without intersecting it, in only one point. So far I can follow Leibniz; but I differ from him profoundly in the status which he assigns to possible being. According to him, possible being is an independent precondition of real existence. Consequently self-evidence is independent of and prior to matter of fact. This is clearly seen in his doctrine of the infinity of possible worlds among which the Creator selects one to be realized to the exclusion of the others. It is true that Leibniz here presupposes one real being—the Creator. But in the only sense which is here relevant the possibilities contemplated by the Creator are independent of Him. He does not determine what is possible and what is impossible. He can only select between possibilities. Leibniz does indeed hold that possibilities have being only as objects of the divine understanding. None the less, God does not create possibilities: He merely knows them; and in this sense they are independent of Him. Hence the realm of evident truth—or as Leibniz would say, eternal truth—is separate from and independent of matter of fact, and imposes conditions to which

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matter of fact must conform. This leaves the status of possibilities utterly mysterious and unintelligible.

The view which I myself hold is as follows: Possible being is always relative and presupposes the real existence of particulars¹; and the link between them is always the universal; the fact that real particulars are always members of sorts or kinds. The universal is a determinable with diverse determinates, a variable with diverse values. Now considered merely as values of a variable, as determinates of a determinable, the instances of a class or kind need not really exist: they may be only possible. On the other hand, apart from real existence, there are no universals, no classes or kinds. If there were no real shapes there would be no shape in general. But given actual instances of shape apprehended as such, it becomes evident that other shapes which may be very different in their specific character are at least possible, whether they really exist or not. If there were no actual shapes there would be no possibility of a perfect circle. But given the general kind of character which we call shape as exemplified in actual instances, we can see that there is an endless variety of possible shapes, and among these the perfect circle. That is to say, the kind of figure which we call a perfect circle is possible relatively to the universal Shape in general. It is possible as a perfectly determinate figure, as determinate as any actual figure presented in experience. This is what I mean by calling it a geometrical possibility. In this sense a round square is not a geometrical possibility.

Leibniz by no means stands alone in making the field of self-evident truth separate from and independent of matter of fact. The friends of forms in Plato's *Sophist* held a similar position, and it is expressly maintained by some writers of the Phenomenological school, such as Nicolai Hartmann in his *Ethics*.² More interesting to us is the position held by Bertrand Russell in the *Problems of Philosophy*. There universals are treated as in their own nature quite separate and independent of the particulars given in experience. They are related in a peculiar way to particulars, but this relation is not essential to them, and all self-evidence is for Russell the perception of the relations of universals as such.

It is very commonly assumed not only that self-evidence is independent of real existence but that it always yields certainty. This may mean either that judgments asserting probability cannot

¹ I also hold that real being is essentially incomplete and presupposes possible being. Both are equally essential to the universe of being.

² I am not prepared to charge Husserl himself with this, at least in the present stage of his development. Cf. *Formale u. transzendente Logik*, p. 150. "*Realität hat einen Seinsvorzug vor jeder Irrealität (Idea, Essenz u.s.w.), sofern alle Irrealitäten wesensmässig auf wirkliche oder mögliche Realität zurückbezogen sind.*"

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be self-evident; or that a proposition accepted on the ground of its self-evidence cannot be false. Both these assumptions are untenable. First, what is only probable is not certain; therefore it cannot be self-evident that it is certain. But it does not follow that its probability cannot be self-evidently certain. The mathematical theory of probability rests on self-evidence. If there are 99 black balls in a bag and only one white one, then it is self-evident and certain that in a random drawing a black ball is more likely to be drawn than the white one. This is perfectly compatible with the fact that it is not certain that a black ball will be drawn. Though what is probable is *not* self-evident, its probability *is* self-evident. So far there is no difficulty. But what are we to say of inductive as distinct from mathematical probabilities? The child who has touched a flame and been burnt refrains from touching the same flame again shortly after. Is its conduct based on any sort of evidence? or only on a purely blind impulse? With the second alternative, which is that presented by Hume, I do not here concern myself. Assuming as it is generally assumed that the child has some sort of evidence to justify his conduct, what kind of evidence can this be if it is not self-evidence? It certainly does not depend merely on matter of fact as given in experience. Probabilities cannot be matters of fact. Granting that the child knows that as a matter of fact he has been burned on touching this particular flame, the likelihood that he will be burned on touching it again is not known as a matter of fact. It may be said that it is an inference from matter of fact. But there can be no inference (as distinguished from a blind impulse to believe) where there is no evident connection between premise and conclusion. It seems to follow that the child's behaviour is either based on self-evidence or on no evidence at all. I cannot here go thoroughly into the question, which belongs properly to the treatment of causation in its relation to problematic induction. But I may state my own position briefly and somewhat dogmatically. The child when it experiences the sequence of being burnt on putting its hand in the flame does not apprehend this event as merely particular matter of fact, but as a particular instance of a kind of sequence which is in general likely to occur or tends to occur. Unless the given matter of fact is apprehended, however vaguely, as an instance of some general rule of probability there can be no transition on evidence to other cases. Hence it would seem to follow that all evidence for matter of fact which goes beyond "the testimony of the sense, and memory" must be self-evidence (if it is evidence at all). None the less, inductive probability presents complications of its own which require separate treatment. When I speak of self-evidence in the present paper I do not mean to include it.

What is self-evident need not be obvious; and what seems self-

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evident need not be true. It need not be obvious, because in order to be able to perceive it we must sufficiently understand the proposition with which we are dealing; and this may require long previous preparation. What seems self-evident need not be true, because we are liable to errors of inadvertence and confusion, through which we fail to distinguish between what really is self-evident and something else which is not so. It seems self-evident to the untutored mind that if the earth were round men at the Antipodes would fall off into space. Here the apparent evidence rests on an assumption which is not recognized as such, but unwittingly taken for granted. What is unwittingly taken for granted is the direction in which bodies fall on this side of the earth. It is taken for granted that they fall in the direction defined by a line drawn from the head to the feet of a man standing upright in such a way that if not stopped by obstacles they would continue to fall in this line, so that, if there were a clear passage for them to the other side of the earth, they would continue indefinitely to fall away from the feet of a man standing upright on this side. On this assumption it really is self-evident that men at the Antipodes would fall off into space. But the assumption itself is not self-evident, and the question whether it is so or not has not been fully faced. If it had been, it would have been recognized as an alternative possibility that the direction of the forces of gravity may be towards the centre of the earth. We may express this by saying that the fallacy is due to a confused and indistinct idea leading to a failure to distinguish between what really is self-evident and what is not so.

Such instances of error as that given by Plato in which a man reckoning up a column of figures says $7 + 5 = 11$, instead of $7 + 5 = 12$, come under a different head. The appeal here is not directly to primary self-evidence, but to a derivative substitute for it which may or may not be adequate. I shall have more to say about this in dealing with verbal and symbolic formulas.

I have yet to say something about the part played by the subjective and objective factors in self-evidence. Here I shall be brief and dogmatic. Setting aside representative theories of knowledge such as the Cartesian, we may say that all evidence—whether self-evidence or matter of fact—is objective. It simply is the object itself exhibiting its own nature to the thinking mind. That red is a different colour from green is evident from the nature of red and green and is not in any way due to the mind which compares them. The Greek phrase *αὐτὸ δηλοῖ*—"itself shows"—is the appropriate formula for all evidence whether self-evidence or matter of fact. On the other hand, it is equally true that in order to constitute evidence, the nature of the object must be presented—or at least regarded as capable of being presented—to some mind. The mind

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does not determine what is evident and what is not evident: this depends on the objective ground of evidence. But unless the objective ground is apprehended or apprehensible by a mind, there is no actual or potential evidence. The same holds for truth: there is no truth or falsehood apart from a mind which asserts or denies. But *what* is true and *what* is false is quite independent of assertion and denial. Now the objective ground of self-evidence evidently extends beyond what is or even can be present to finite minds. The relations of shape, size, distance, and direction between bodies as they exist in nature have logical properties which would make them capable of mathematical treatment if we knew them with sufficient completeness and precision. But such knowledge in its intricacy and boundless complexity is hopelessly beyond our reach. All that we can say is that from the general nature of spatial relations it is evident, though only indeterminately evident, that the geometrical knowledge of an omniscient being would comprehend all this detailed complexity. What I mean by indeterminately evident may be illustrated by an example. I know that a long column of figures must have a sum, and a definite sum; but unless I have added it up I do not know what this sum is. What is self-evident in this case is indeterminate, and for convenience I use the phrase "indeterminately self-evident."

This has a bearing on the nature of causal necessity. The question whether this necessity is of a different kind from that on which self-evidence depends is by no means decided by pointing out that we can never completely see how any given effect self-evidently follows from any given cause. We may never be able to know perfectly the nature of the effect and the nature of the cause so as to have complete insight into their connection. Yet it may be indeterminately evident for each particular event that it has a cause, and also that the relation between the event and its cause is such that with adequate knowledge of both it would be self-evident that the effect can only have this cause and this cause only this effect.

I am not here prejudging the question about causal necessity in its relation to self-evidence. I am only pointing out what the question is. If I am right it is not decided, and cannot be decided, by such arguments as those used by Hume.

There are some important questions which I have yet to consider, such as the nature of evidence in symbolic logic and pure mathematics and the general question whether self-evident propositions are synthetic or analytic. But before proceeding to these topics I must first consider more exactly how the apprehension of self-evidence takes place and on what conditions it depends. I shall do this by analysing a special example which is given by Johnson to illustrate what he calls "intuitive induction."

PART II

To quote Johnson:—

"In judging upon a single instance of the impressions red, orange, and yellow, that the qualitative difference between red and yellow is greater than that between red and orange (where abstraction from shape and size is already presupposed) this single instancial judgment is already implicitly universal; in that what holds of the relation amongst red, orange, and yellow for this single case, is seen to hold for all possible presentations of red, orange, and yellow."

I agree with Johnson in the importance which he attaches to this process of "intuitive induction," as he calls it; but I am not altogether satisfied by his account of its nature. What does he mean by "implicitly," when he says that the "single instancial judgment is already IMPLICITLY universal"?

He says that generalizations of this sort "involve an intermediate step by which we pass from one instance to others of the same form and in this passage realize that what is true of the one instance will be true of all instances of that form."

It is, I take it, on account of this intermediate step that he regards the instancial judgment as only implicitly universal. But it seems to me that there is no such intermediate step. If in comparing the particular instances of red, orange, and yellow we apprehend each of them as being instances of the general sorts of colour that we call red, orange, and yellow, then in apprehending the orange as intermediate in quality between red and yellow, we directly apprehend orange in general as resembling in quality red in general and yellow in general; the further step of which Mr. Johnson speaks is not required. On the other hand, if we apprehend particular instances of red, orange, and yellow without recognizing them as being particular instances of these kinds of colour the further step is impossible. What is required is not a further step but a previous step, by which we come to form the general ideas of red, yellow, and orange. In becoming aware of the self-evidence of the general principle there is no transition from the given instance to other instances. It is only in bringing a given particular case under the general rule that there is a transition. There is here an inference, but it is deductive rather than inductive.

It would seem that the reason why Mr. Johnson regards the process as a kind of induction is that—as he thinks—it involves this intermediate step from the given particular instances to other particular instances. If this is what is meant, the use of the term "induction" seems to me to be here quite misleading. None the less, I do not reject it. I accept it for a reason which is the very contrary of Mr. Johnson's. I accept it because, as I have already indicated,

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even problematic induction seems to me to be ultimately based on judgments essentially akin to those which Mr. Johnson refers to as "intuitive induction."

I pass next to the part played by possibility in intuitive induction. Mr. Johnson says that "the relation amongst red, orange, and yellow is seen to hold for all possible presentations of red, orange, and yellow"; but he has not analysed what is implied in this use of the term "possible." The general proposition is seen to hold not only for all actually perceived, or even for all actually existing orange colours, but for all POSSIBLE instances of this sort of colour. It thus covers instances which may never have actually existed in the past and may never exist in the future. What is then meant by calling them "possible"? Certainly not merely that we do not know whether they ever have existed or ever will exist, for this does not answer the question WHAT IT IS about which we are thus ignorant. It does not account for the fact that these possible instances are positively seen to be possible, so that we have a right to deny that they are impossible. This last statement gives us a clue to the nature of the possibility. The possible instances of orange which may never be actual are possible only in a special way; they are possible only as being instances of the general nature of orange. If they do not actually exist, this is due to other conditions, and not to the general nature of orange colour. So far as the general nature of this sort of colour is concerned, they are capable of actually existing as *completely determinate* instances of it. They are therefore determinate colour possibilities. This we can positively SEE; it does not in any way depend upon our ignorance. There may be other conditions, physical, physiological, general, or particular, which bar the realization of such possibilities, making them, for instance, physically or physiologically impossible; none the less, they remain positive and determinate colour possibilities.

It is most important to notice that even the instances from which intuitive induction directly starts need not, as Johnson seems to think, be actually perceived or actually exist. Some of them or all of them may be merely possible. In our present example, though actual instances of orange seem indispensable, it is not necessary that there should be actual instances of pure red or pure yellow. From the general nature of such a graduated series it follows that there may be instances of orange more red or more yellow than any actually perceived, and in the limit pure red and pure yellow. In geometry, which deals with perfect figures, all of the instances directly relevant may be only possible. It is no doubt true that if there were no actual lines approximating to straightness in various degrees, perfect straightness would not be possible or conceivable. But in being aware of lines as varying in this way, we

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are aware of the limiting case of perfect straightness. Starting from an instance of a line which is at any rate not known to be perfectly straight, we have only to say, "if this line were perfectly straight," in order to have the thought of a particular possible instance of perfect straightness. This applies to the example which Mr. Johnson gives of what he calls "summary induction": "Two straight lines terminating at the same point cannot intersect at any other point." Here, no doubt, we perceive or image two lines which are at least approximately straight, but it is not with these lines that we are dealing. We deal only with supposed lines. The question we ask is: "If these lines were perfectly straight, then what follows?" It is therefore with a particular geometrical possibility that the so-called "summary induction" is concerned. This being so, there is in principle no essential difference between Johnson's "summary induction" and his "intuitive induction." He himself seems to proceed on the assumption that summary induction is concerned with actually perceived or imagined lines; hence his account of it is, as Mr. Mace points out,¹ entirely untenable. We may say that what is intuitively evident in Johnson's example is that the mere lengthening of the lines beyond the point of their intersection, provided they are perfectly straight, can never be followed by their convergence, but only by their greater divergence. It may be said that this is true only in Euclidean space. I answer that Euclidean space is at least a geometrical possibility, though it may not be the only one.

I pass now to the question whether self-evident propositions are analytic or synthetic. The answer depends on what we are going to mean by "analytic" and "synthetic." If "analytic" is taken to mean "tautologous," they are certainly not analytic; and if "synthetic" means "conveying information," they are certainly synthetic. Yet there is a sense—and the only useful sense—in which they are analytic. Turning to our example, it may be said that the proposition, "any orange resembles both red and yellow," is a tautology, because it is true by definition. How are we to define orange except as the colour quality intermediate between red and yellow? But the argument proves too much, for no one, I presume, would admit that a proposition which depends, as this does, on the experience of particular colours can be a tautology. The proposition would not be self-evident to a cortically blind person. There must be a fallacy somewhere, and it is not difficult to see where it lies. What is true by definition is not therefore tautologous, unless definition itself is tautologous. But this is not and cannot be so. To define is to define something, and this cannot in the first instance be a word or symbol. To define a word or symbol is to state what it is intended to stand for. What is primarily defined is what it is intended to stand for.

¹ *Principles of Logic*, p. 247.

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It is only in a secondary or derivative sense that the word or symbol itself is defined. Definition, then, is of some object of thought which we mean to refer to and which we may or may not represent by a word or symbol. Definition assigns characters such that whatever possesses them is **THEREFORE** what we mean to refer to; but the definition does not make or in any way constitute the *being* of what is defined. You must first catch your hare before you can cook it. What is to be defined must first be found or discovered. To be true by definition, then, is to be true by the nature of what is defined, but no tautologous procedure can ever find what this is. In this respect "true by definition" and "true by observation" are on the same level. A botanist carefully observes and writes down the description of a plant; afterwards, relying on this description, he asserts that the flower has compound leaves. But that is already in the description, it conveys no new information. Are we then to say that his proposition is tautologous? Only if we say that the description itself is tautologous—which it plainly is not. It may be said that definitions are arbitrary, but what does this mean? So far as I can see, it means only that we are free to **SELECT WHAT** we are to define, and that this depends on our interest; but **SELECTING** is quite different from **MAKING**. If I select a cigar from a box I do not make the cigar. So those who invented the game of chess selected among an endless variety of possible moves certain moves for the chess pieces, and proceeded to define these moves. But the possibilities which they selected were not made possible by their selecting them; they were made possible by the general nature of spatial conditions and the special constitution of a chess board.

A proposition is analytic without being tautologous when the data required for answering a question are all included in the question itself. Thus the question concerning the qualitative relations of red, yellow, and orange can be answered merely by examining the nature of these colours without introducing any further datum which is not thus supplied. On the other hand, the question whether all bodies gravitate cannot—or at least could not before Einstein—be decided merely by considering what we mean by the law of gravitation and what we mean by body as something extended and movable in space. Further data are required, and the ultimate appeal is to problematic induction. But if we start by assuming properties of space-time from which gravitation follows as a necessary consequence, the proposition that bodies gravitate is so far analytic, though the proposition that space-time has these properties is not so, depending ultimately on problematic induction.

Propositions which are in this sense analytic are not therefore tautologous. They are not so because the analysis consists in distinguishing different parts of a whole in their relation to each other.

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(By a whole I mean whatever "includes," and by a part whatever "is included.") In our example, it is plain that no scrutiny of orange by itself, or of red or yellow by itself, would enable us to see that orange resembles both red and yellow. The terms must be brought together and compared. But what is involved in this? Is it the mental operation of comparing which brings together the otherwise separate items? This cannot be so, because in order to compare, the items compared must initially be apprehended as related to each other. Further, if the "synthesis" depended on the mental process, then the resulting relations themselves would also depend on the mental process. We should thus be reduced to the position of Locke, that relations are the work of the mind. This would mean that the mind makes the resemblance of orange to red by comparing them. I can see no alternative, except to assume that in intuitive induction we are dealing with a whole which the mind itself does not constitute, and that we are analysing this whole into its constituent parts and relations.

But what is the nature of the whole in the example taken from colours? No doubt we apprehend the colours compared—possible or actual—as related in space or time; but this is obviously not sufficient. What seems essentially necessary is that the instances compared should be apprehended as instances of colour. This makes it possible to distinguish more special kinds of colour; for instance, orange and red and yellow; then we may compare instances of orange as such with instances of red and yellow. The distinctively relevant type of unity in our example is, then, unity of class or kind, including instances or specific sub-classes as its parts.

PART III

I have left myself time for only a brief reference to the special provinces of logic and mathematics. I must content myself by indicating the general way in which I should approach these topics. Self-evidence ultimately depends on intuitive induction, and therefore on actual instances given in experience or possible instances arising out of the general nature of what is thus presented. Logic and mathematics deal directly only with possibilities. Further, the self-evident propositions with which they are concerned are not only self-evident, but *a priori* in the distinctive sense which Kant has given to that ambiguous term. They enter essentially into the general structure of our knowledge. In this sense special propositions about colour as such are not *a priori*; but such propositions as: " $1 + 2 = 3$ " or "what is contained in a part is contained in the whole," are *a priori*. They are concerned not merely with general ideas, but what Descartes and Spinoza would call "common notions." It is

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possible to assert that a proposition is *a priori* and yet to deny that it is self-evident. Hume, for instance, not only admits, but insists that the principle of causality is *a priori*. Without it the individual would be confined to his own momentary impressions and images and the remembrance of his past impressions and images; there would be nothing that could properly be called knowledge of a world. Hume's whole difficulty was, that though the causal relation was in this sense always *a priori*, it was not self-evident—a difficulty which Kant does not seem to meet satisfactorily.

Another characteristic of logic and mathematics is their systematic employment of symbols, which seems remote from the self-evidence of intuitive induction. This withdrawal from intuitive induction is not, however, peculiar to technical symbolism; it is found also in the use of ordinary language. When I say that part of a part is part of a whole, or that orange is like both red and yellow, I need not have before my mind any particular instances actual or possible; and yet I seem to see that the propositions are evidently true. But if we examine the nature of such evidence it turns out to be secondary and derivative; it is the result of previous experiences in which we have apprehended the evidence at first hand through intuitive induction. Both Descartes and Locke were quite aware of this, and Locke was led by it to the distinction between "habitual" and "actual" knowledge, and also to his emphatic denial that "general maxims"—as he called them—are the principles first known on which all our other evident knowledge depends. Some such distinction as Locke's between habitual and actual knowledge is certainly needed where particular instances required for intuitive induction are not present. Primary self-evidence is not present, but only a derivative and secondary substitute for it. The point is, that in case of obscurity, doubts or difficulty, the ultimate appeal is always to primary evidence. As Berkeley said, "we must get behind words and consider the things themselves." Habitual knowledge bears a relation to primary self-evidence analogous to that of credit to cash. Credit works well enough so long as it is not seriously called in question, but when it is, the alternative is either cash or bankruptcy. Symbols seem even more remote from primary self-evidence than ordinary language, for even habitual knowledge may be here to a large extent dispensed with. We may manipulate the symbols according to certain rules of operation with little or no reference to their meaning. Such procedure can only be justified if the meaning of the symbols and of the rules of operation is to begin with adequately based on primary self-evidence. But here again, in cases of doubt or difficulty it is always legitimate to raise the question whether this essential condition has been adequately fulfilled.

I must in conclusion say something about the connection of

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symbolic logic with pure and applied mathematics. I speak with fear and trembling, as I am not an expert in either of these subjects. I am, however, encouraged by the fact that my view coincides in substance with that of Johnson, who was an expert in both. Symbolic logic may for our purpose be regarded as distinctively concerned with the logical properties of relations, on which inference depends. Very different kinds of relations relating different terms may have the same logical properties. Inclusion, equality, resemblance, temporal priority and subsequence, are all transitive relations. If x is related in any of these ways to y and y to z , then x is related in this way to z . If $x \mathrel{r} y$ and $y \mathrel{r} z$ then $x \mathrel{r} z$. This formula supplies a definition of transitive relation. What evidence is there that certain kinds of relations do possess these logical properties? How in the first instance can we know of such logical properties at all? Only by intuitive induction depending upon particular instances actual or possible. But when the work of intuitive induction is done, we may consider logical properties in abstraction from particular instances and from the diverse kinds of relation which exhibit these properties. This leads to the system of symbols which is called symbolic logic. Now, according to Bertrand Russell, pure mathematics is just a complex development of symbolic logic. Is this position really tenable? The germ of Russell's view is to be found in Descartes, and it will be convenient to proceed by starting from the Cartesian position. Descartes begins by raising the question: What have the several branches of mathematics, geometry, arithmetic, astronomy, mechanics in common, which entitles them all to be called mathematics in spite of the diversity of their subject-matter? He insists at the same time that what they have in common must account for the evidence and certainty of mathematical reasoning in which they all agree. The answer which he gives to his question is that mathematics, whatever may be the special subject-matter with which it deals, is always concerned with certain relations or proportions.

Though Descartes does not himself use the phrase, it is plain that he considers these relations or proportions only so far as they had certain general logical properties. He thus developed a universal mathematics which may properly be regarded as also belonging to symbolic logic. From this universal mathematics he had next to pass back again to special branches. He selected geometry for special treatment, and in particular the geometry of conic sections. In dealing with this special subject-matter he needed premises which his universal mathematics did not of itself supply; for example, the fundamental premise that the position of every point in a plane could be determined by its perpendicular distance from two straight lines intersecting at right angles within the same plane. The crucial question is, on what sort of evidence do such propositions as this

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depend? The natural answer is that we know they are self-evident through intuitive induction, in which we consider only the general nature of spatial relations. In Cartesian language, such propositions are evident from the *clear and distinct idea* of extension and its possible modes. If we provisionally accept this view as correct, it follows that the geometry which deals with spatial relations is not merely a complex development of symbolic logic, but requires principles of its own which in contrast to physical facts and theories are proper to mathematics. It is true that these special principles assert relations having logical properties; hence it follows that geometry has always a counterpart in a symbolic system, which, so to speak, is its logical skeleton; but this logical skeleton is not itself geometry, unless we are to say—as I once heard Bertrand Russell say—that geometry has nothing to do with space. The case is essentially different with mathematical physics or mechanics. Here intuitive induction no longer suffices, we must have recourse in the long run to problematic induction based on empirical data. If we regard behaviour in accordance with the law of gravitation merely as one possible way among others in which bodies may or might behave, we are still within the region of pure mathematics as distinct from physics; but if we ask the question, whether and how far the law of gravitation is a law of nature in accordance with which actual bodies actually behave, however important a part mathematics may play in solving the problem, mathematics by itself does not suffice. The results which it yields have to be constantly tested by their agreement or disagreement with empirical data which are not intuitively self-evident.

This account of the matter, it will be said, is woefully behind the time. In particular my sharp distinction between physics and mathematics is quite out of date. What right have I to assume that such principles as that on which the Cartesian geometry is founded are self-evident, when the accepted doctrine now is that all—or at least many of them—are due to problematic induction?

In and through intuitive induction it seems to me self-evident that two straight lines intersecting at a point cannot intersect at any other. Is there any satisfactory way of showing that I am mistaken? It certainly is not enough to say that in appealing to this sort of evidence I may be committing some fallacy of confusion or inadvertence. Human beings are always in principle fallible, whatever may be the nature of the evidence on which they rely. The only really satisfactory procedure would be to point out some geometrically possible alternative, such that keeping it in view, what appeared to be self-evident before no longer appears self-evident. It may seem self-evident to the untutored mind that two lines continually approaching each other must eventually meet; but

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the apparent self-evidence ceases when the special conditions are pointed out under which asymptotic lines are possible. Now no one has even attempted in this way to meet the difficulty about intersecting straight lines. There is, however, another course open to those who challenge the authority of intuitive induction. On the ground of other evidence, based ultimately on empirical data, they may deny that the seemingly self-evident proposition is true, and infer that THEREFORE it cannot really be self-evident. This leads to a very unsatisfactory position, as it involves an ultimate logical antinomy. It is really arbitrary to decide dogmatically which of the two sorts of evidence is to be preferred to the other. All attempts to account for the seeming self-evidence by suggesting that we are now under the influence of hardened prejudices due to precipitate interpretation of empirical data in the primitive experience of the individual or his ancestors, really beg the question.

It will be objected that I have been throughout assuming Euclidean space. What account am I to give of non-Euclidean spaces; in other words, what is the status of metageometry? Here there seem to me to be three distinct alternatives which are apt to be confused with one another. First, we may mean by the various kinds of space various alternative developments of symbolic logic. Starting from Euclidean space, we may find a logical counterpart for it in a complex symbolic system, which in itself has no special reference to spatial relations. We may then discover that there are other such symbolic systems possible and self-consistent, which substitute for the logical counterpart of the axiom of parallels some other symbolic formula. But it does not in the least follow that such systems correspond to any possible system of spatial relations. If they are called geometries, they are geometries which have nothing to do with space, or as Descartes would have said, with the possible modes of extension. This view would remove all difficulties, but it by no means satisfies the claims of metageometry. The second alternative I have already virtually dealt with. It is that in intuitive induction itself we either find it evident that there are alternatives to the axiom of parallels or at any rate do not find it evident that there cannot be. But intuitive induction seems positively to reveal the impossibility of this alternative. When we consider only the general nature of spatial relations, we find it positively and objectively inconceivable that, for example, precisely similar triangles different in size may be geometrically impossible. The third alternative is the one which I find myself driven to accept.¹ It is that what is called the distinction between different kinds of space is not properly a geometrical, but a physical distinction. It is not grounded in the general nature of spatial relations, but in different possible assump-

¹ If I rely on my own judgment and not on the authority of experts.

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tions which we may make concerning the ultimate constitution and laws of the physical world. Though it is geometrically impossible for two intersecting straight lines, however far they are produced, so long as they remain perfectly straight, to intersect again, yet ultimate physical conditions may be such that they cannot remain perfectly straight, but, on the contrary, diverge from straightness in a regular way, so that in the end they must meet.

I can find only one way of making this vague suggestion more definite. I have to fall back on the now unfashionable, but not exploded, conception of aether, what Sir Oliver Lodge calls the "aether of space," as an omnipresent medium within which all other forms of material existence are processes or states. On this assumption what are called different spaces are really different hypotheses concerning the general constitution of the aether as determining what can and what cannot take place within it. The possible alternatives on this view will not, properly speaking, be geometrical but physical. Intuitive induction cannot decide between such alternatives. The decision can only be reached by interpreting the empirical data of observation and experiment. If the results reached in this way seem to the unscientific mind strange and hard to believe, this may well be due to hardened prejudice arising from a precipitate interpretation of empirical data in primitive experience before critical reflection began. I suggest with all diffidence that this may be what metageometry means so far as it is not merely a development of symbolic logic. On this view, if this view be tenable, its validity is secured and its claim to utility and importance is satisfied. All that it would have to surrender would be its title to be called "geometry," and this would be fully compensated by its title to be called fundamental and universal "physics." If the view I suggest is untenable, I should like to know precisely wherein the fallacy which misleads me consists.

THE PLACE OF TRADITION IN THE MORAL LIFE

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THE term tradition is frequently used in the narrow sense of oral transmission from one generation to another; occasionally in the wider sense of transmission of any kind, written or oral or forms of behaviour, derived from a preceding generation. Sometimes it includes custom; sometimes it does not. At times it refers to the process of transmitting; at other times to the result transmitted.

We shall use the word here in the widest possible signification to cover that procedure peculiar to human life by which the findings of one generation of a given society are consciously passed on to the succeeding generation, and are received by the latter, not as derived from their own experience in the present, but as recognized or recognizable authoritative communications from the past. In this sense the term will embrace all that is commonly meant by the customs of a society, as well as such instruction as is intended to and generally does gain conviction by the weight of previous experience of others rather than by the weight of argument appealing to the individual mind alone.

That tradition in this comprehensive sense does play an essential part in the moral life of the individual there can be no doubt. It is important to point out what this part is; to vindicate its place in moral experience; and to show that it is indispensable to morality, which is the interrelation of human individuals with one another by action, thought, and emotion.

The moral order of a man's life is carried on under temporal conditions. While it is always focussed in the present where alone the individual is in direct communion with his fellows, it keeps a man in continuity with the past of his society, and it prepares and points the way towards the future. Moral activity consists, from one point of view, in a succession of changes, for it is meaningless without acts, and an act is in some sense a new event. The succession derives from a partially known past, passes through the better known present, and proceeds to a relatively unknown future. These stages are quite inseparable if a man is to maintain the substantial unity of his own life; they are equally inseparable if he is to maintain his union with his fellows in society.

The most familiar and unmistakable illustration of the continuity between the individual and the past of his society is found in the

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language he employs to express his ideas, whether moral ideas or other ideas. This is not simply a means of communication with his fellows in the present. However much it is modified by present use, it is never the creation of the living individuals who use it at any given time. It is a social heritage which a man acquires without testamentary title, and upon which he seizes with the instinct of self-preservation. In it there lies, as in a palimpsest, the accumulated mental life of antecedent generations. It is the current coin of thought which bears the image and superscription of the universal mind, which animated the intercourse of individuals in the past, blends their lives in the present, and thus establishes intellectual fellowship between one age and another. The language of a society, therefore, does not merely enable a man to understand those who went before him; it compels him to understand them in order to be understood by those who live with him. He cannot take up and lay down this medium of communication at will, as if it were some instrument at his arbitrary disposal. It is doubtless his own and his own by inheritance, but only in the sense that it is the common bequest of the society from which he derives this birthright and which ensures his allegiance by the gift and the acceptance. By the marriage of his thought to the speech of his community he has given hostages for the loyalty of his mind. By conferring upon the individual the incalculable benefit of orderly channels of communication with the minds of others, society thereby takes indirect security on its own behalf against the ingratitude of his intellect. In the case of the normal individual the benefit is readily acknowledged: he cherishes as sacred and cultivates as best he can the language of his people. But whether with or without acknowledgment, there is no escape from the control exerted over the course and character of the ideas of human beings by the modes, forms, and rules of expression which came from the past. They partly shape what he has to say to his fellows, still more how he is to say it, and altogether how he is to become intelligible. The consequences of ignorance or neglect of speech are misunderstanding, fear, and isolation, consequences which no moral agent can face with equanimity. Words have an accepted meaning long attached to them which tradition has stamped with approval and current usage supports, even should innovation modify. The very fact that all agree generally on the meaning makes the individual feel a fellowship with a whole people in establishing intimacy with an individual. Language symbolically lifts his thought out of its particular connection with the passing state of his own transitory existence, and enables him to realize that his mind has an inner connection with his ancestors as well as his contemporaries. And the more fully he becomes acquainted with the language of his people and all that it contains in song and story and literature, the more

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does he feel that his particular mind can hold communion in no metaphorical sense with all those who have gone before him. The indirect effect of this is remarkable. It tends to create, in some individuals to a high degree, in all individuals to some degree, a unique feeling of loyalty to the vanished and invisible members of the society of the dead, which is thus so closely bound up with the society of the living. It is as if those of earlier days appealed to those of a later time to preserve the common thought which made their own life possible as representatives of a common stock of humanity, appealed to them to keep faith and contact with the past, to remember and not to forget. Loyalty of this kind profoundly influences the whole moral attitude of the individual. It stimulates the worship of the heroic, kindles admiration for those who are altogether beyond the reach of envy or jealousy, and awakens reverence for the social institutions which are rooted in the past. The reaction of such ethical emotions on the life of the present is too obvious to require comment.

What has been said holds of language considered both as a specific kind of tradition, as itself one way in which tradition plays a part in the life of the individual, and as a vehicle for handing on the written or memorized achievements of the past.

Language again promotes the moral life by supplying the terms in which moral relationships have been and are embodied. The mere assimilation of these terms from the earliest stages of childhood onwards helps to give precision and definiteness to the highly involved character which human intercourse possesses. In all societies some situations in which individuals stand to one another have been selectively distinguished from the endlessly varied complex of social adjustments. Either because of their prominence or their importance for a type of social life, these have been given specific names. They are the names of the virtues or the vices or the frailties of individual character, which are lauded or reprobated, approved or condemned. Upon these the mind of the individual is from the first concentrated; around these his moral emotions gather; and by them his moral life is guided. Each acquires a nuance of suggestion; each colour of good and evil has a peculiar texture of interest, which catches or arrests the hesitating and wandering will of the individual, without any need on his part to gauge consequences and effects. So closely can moral situations become identified in the mind with the words which convey them, that the very names have the power and authority of actual moral demands.¹ The bare mention of courage and kindness,

¹ This curious effect is fairly familiar in everyday life. Hardly in any other sphere have words such an influence as they exercise in moral experience. They appear to be regarded at times not as symbols, but as the very facts denoted, or at least as inseparable from these facts. Some people seem even to suppose that morality consists solely of the terms in which the moral life has found expression, as if language could wholly contain and had exhaustively

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cowardice and cruelty, will vibrate through the character, and raise or depress the moral nature of the individual.

Another form in which tradition enters the individual's moral life is through custom. Its operation is sometimes assisted by language, in certain cases to an important degree. But it is specifically different in its process of operation. Customary procedure consists solely in ways of acting, general and relatively uniform in character, which have been handed on from one generation to another largely by imitation and suggestion, and to some extent by direct instruction. Customs do not concern the feelings except indirectly; and they are not ways of thinking except in so far as thinking subserves action. As long as the customary acts are performed, other correlative states of mind are at best subsidiary and at worst indifferent to those concerned with customary performance.

Customs are imposed on the individual without any necessary appeal to his consenting reason. They are accepted because they are imposed by the collective intent of those who already follow them, and because those on whom they are imposed are at the time relatively uninitiated into the society to which they belong and therefore relatively incapable of fulfilling the purposes or of meeting the situations with which the customs are concerned. The inferiority of the uninitiated relatively to the initiated inevitably induces the former to bow before the capacity for effective and successful adjustment which the latter can make. The superiority which always comes from orderly procedure of any kind carries with it an authority which is more or less readily admitted by those who do not or cannot of themselves conform to that order. This authority is one source of the sanction which the custom possesses for those who come to accept it. The other source is the collective pressure which is or can be brought to bear on the individual to induce him to fall in with it. For customs, being acts of a certain kind, can always be taken to constrain as well as induce an action in another, or to prevent action of a different kind. In the more important customs, the whole weight of the authority of all who have followed the custom in the past and who do so in the present, combines with the collective pressure of the whole society to give these customs a sanction which any particular individual can hardly presume to dispute. Such customs are not merely sanctioned, they are even regarded as sacrosanct.

conveyed all that moral experience is. This partly accounts for the reluctance which most people have to analyse and discuss morality, and for their incapacity to think about morality with detachment and impartiality. It also accounts for the difficulty in finding hospitality for new moral terms coined as the result of a fuller development of the moral life, *e.g.*, generosity to enemies, humility of mind. They appear at first as an interference with the current moral order; they are an obstacle or "foolishness."

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Customs are not all equally important. But they all have the same general character above described. They operate in widely different areas of social life: there are customary ways of carrying on an occupation, customary ways of ceremonial behaviour, customary ways of acting towards classes of individuals in a society. The efficacy of a custom and the efficiency of the sanction will be found to vary from society to society and according to circumstances. Moreover, while customs prevail in all societies, some are more completely guided by custom than others. All this, however, does not affect the main fact that to a marked extent tradition in the form of custom does shape the moral intercourse of individuals.

The operation of custom implies the existence of a relatively stable society which has had a continuous life of its own for a considerable period of time, and which has developed and established, to some extent, institutions peculiar to itself. Customs are always social forms of procedure, and they subserve the life of the particular society to which they are relevant. They are functions exerted in the interest of the conservation of the society. In this respect they resemble instincts in the life of an organism. All instincts operate in the interest of the preservation of the organism; and no instinct—not even the maternal instinct—is normally destructive of the organism. Similarly customs have as their ultimate object the preservation of the society, the more important customs equally with the less important lead to this result. It is inconceivable that any orderly mode of action could be uniformly imposed upon successive generations of individuals, if its effect were to imperil or destroy the stability of a society. Doubtless stability does not constitute the whole of a society's well-being.¹ But it is essential for the continuity of a society; and without continuity a society is a herd and not an orderly arrangement of human beings.

While customs are, in the way indicated, comparable to instincts in the organism, in an important respect they differ from instincts and are closely akin to habits in the individual. Instincts are primarily inherited and specific modes of response of the natural individual to his environment without any prior training or experience. Customs arise and are always acquired; they are relative to a particular society of men; they are in the first instance the result of experiment and experience; they become confirmed and established by successful repetition of actions under similar recurrent conditions; and they may be changed or in certain cases abandoned in course of time. In all these respects they clearly resemble habits

¹ Hence customs which secure stability at the cost of other important elements of human welfare will in course of time be found to be bad customs. This gives rise to the revolt against custom. But it seems meaningless to describe any custom as "inherently bad."

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in the life history of the individual. On the other hand, they differ from such habits in that habits vary from individual to individual in the same society, whereas customs are common to all the individuals concerned. Habits involve selective adjustment to an individual environment; customs are compulsorily imposed adjustments to a common environment. Habits may be inherently destructive of the life of the individual from the first (*e.g.* vices) and may be condemned even by the individual whose habits they are; customs are experimentally tried forms of social conservation and are always in some degree approved while they last.

Customs are expressions of the common life of a society. They are general in their operation; and they involve a recognition, more or less explicit, of identity of interests and purposes between individuals and between successive generations. They at once imply and create a community of moral attitude in a plurality of moral agents. People who act in the same way in similar circumstances feel like-minded in relation to one another. And like-mindedness is one of the essential achievements of the moral life at its poorest as well as at its best. Once established, it tends to remain and develop in other directions, in feeling and thought as well as in action. There thus come to be similar ways of thinking and feeling as an indirect consequence of customary action. Behind all customs lies some exercise of reason; for customs are consciously general and orderly in their operation; they regulate action in uniform ways: and these are characteristic manifestations of the life of reason. The effect of following customs is thus to cultivate and encourage the consciousness of rationality in the individual and of community of reason between individuals.

It is because of this character and effect of custom that certain customs become definitely formulated and become rules of common behaviour instead of merely customary ways of behaving. If and when this stage is reached, the sway of custom as such is modified or ceases altogether. It is modified if the sanction peculiar to custom effectuates the operation of the rule, as for example when a rule is followed simply because it is the custom to follow it. It ceases altogether if the rule is adopted by the individual as a regulation for his own action, and without reference to any authority which it derives from the past. In the latter case the rule is made effectual in its operation by reference to the anticipated consequences which result from following it or, more commonly, the consequences which result from not following it.

There is thus a marked difference between leading a regular life according to customary procedure, and living by rule, even if the rule can be traced back to some custom in the past. The individual who follows the custom has regard to the general benefits directly

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or indirectly secured. The individual who lives by rule has mainly in view the disadvantages to himself which issue from not following the rule. The former accepts the custom under a non-rational sanction; the latter finds a reason for accepting the rule in its appeal to his self-interest. The former would in most cases follow the custom even if it led to his disadvantage; the latter would generally in such a contingency question the bindingness of the rule.

Custom being essentially a uniform procedure imposed upon individuals is very frequently supposed to be an enthrallment of individual life, and custom comes thus to be set in opposition to individuality. This is largely mistaken. Custom is the primary charter of social institutions which alone give constructive and relatively permanent embodiment to the moral relationships between individuals. Wherever we find customs we find institutions of some kind, be the institution a political state, a village community, or any other institution which may arise within those large organizations of men. And conversely, wherever we have institutions we shall find customs of some kind, either alone controlling the institution or operating alongside formulated rules. To fall in with a custom is thus not to enthrall but to enfranchise an individual as an accepted participating member of an established order of human life. He becomes an acknowledged shareholder in the accumulated moral substance of the institution. His adoption of the custom involves him in consequential moral relationships with others beyond his power to calculate or anticipate. His individual life is necessarily expanded to its wider issues in the process. His isolation, with its accompanying weakness, is overcome. The horrors of moral solitude, which haunt individuals, melt away. Narrowness of mind and the fear of his fellows—the greatest fear to which a human being can be exposed from any finite creature—disappear in the consciousness of orderly co-operative action with others for a common end. Hence the remark of the wisest man of Greece that to be moral is to live in accordance with the accepted social order of your own country; and hence, too, the wisdom of the answer of Pythagoras, when someone asked him what was the best education for his son, "make your son a citizen of a people with well-established institutions."

Custom, as we have seen, is a uniform and relatively systematic course of action to meet a common human need. It is a ready-made plan of adjustment to a situation, which attracts because it is ready-made, which it saves time to accept, and which few individuals left to themselves would have either the capacity or the energy to contrive with even approximate success. To take the line laid down by custom is to take the highway of safety; for a well-trodden road is generally the safest, and it invariably leads to a definite end. A custom affords an orderly and to that extent a reasonable way of

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living; it therefore enables the individual to make use of the reason of others in occasions obscure to his own. And everyone, no matter how intelligent, faces at some time, and that not infrequently, such situations. "The measures of conduct proper for the different occurrences in life are so various that it is impossible for any man to trace them all to their foundations."¹ Where a man cannot guide himself and yet must act, his best course is to follow if others have found a way before him.

Behind all established customs there lies a long course of experiment, of trial and failure, leading to a final accommodation of practice to purpose. Every custom thus represents the capitalized experience of men. To accept its prescripts is to draw interest from the funded moral capital of the past, and to enjoy as an inheritance an unearned increment of moral advantage in the present. The conditions of social existence are not handed to man at birth as a gift: they are discovered and acquired in the process of social intercourse. In virtue of those peculiarities of man's nature to which we have previously referred, a society can accumulate, and stereotype for the common well-being of all, those social aptitudes which give it stability and continuity. Without this, man would be always recovering the same ground, re-learning the same modes of adaptation to his fellows. His constitution as a human individual is constant, and the moral situations he has to meet are relatively limited in number and repeatedly recur. There is therefore neither occasion nor reason for challenging established custom; for the individuals doing so would have merely to re-learn at their own expense, instead of at the expense of others, the form and merits of the customary procedure which they oppose, with the added disadvantage that there would be no guarantee that a better could be found. It is the distinctive feature of man as compared with other animals that he can adopt and adapt the findings of the experience of others, both his contemporaries and those who have preceded him. The influence of custom is but an illustration of this general characteristic. In this as in other cases, individuals recognize almost universally that the presumption of advantage is on the side of the general practice by which a social situation is adjusted. Hence the emotion of respect for custom as custom becomes an adjunctive support for the authority which a custom otherwise possesses, more especially in the normal, well-disposed member of a society. The disposition to comply with a custom will often turn the scale in its favour, even when it seems to operate to the disadvantage of the individual at a particular moment. When to this is added the confidence of the many who follow the custom in the accumulated experience on which it rests, the opposition to the custom on the part of anyone or of a few can count for little

¹ Tucker: *Light of Nature*, II, p. 597.

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and can secure still less. No one, especially the young or inexperienced, can run counter to a customary mode of behaviour in a community without the serious risk, indeed the practical certainty, of breaking their heads or their hearts in their career; and the contempt of the outcast for the conventions which have been challenged will, in most cases, be but the parade of defiance in a weak cause in place of the consolations of defeat in a great one.

Custom is one way in which men have learned by experience how to live together, and is thus a framework of moral goodness. The good it secures may be commonplace, but any goodness is preferable to none, and is at worst the basis of a better. It will always gain the support of all the well-disposed on that account; and it requires no great wisdom to recognize and to insist that men have first to be accomplished in ordinary goodness before they expect to attain that which is extraordinary. Few men have any distinctive individuality worth emphasizing: none that is worth over-emphasizing. To reject experience in the moral life is to despise mankind, and that is to be on the threshold of immorality. Experience teaches virtue, and in certain cases it creates virtue. One of the virtues it calls forth is prudence. The wisdom that knows how to use the experience gathered from the past is a constituent element in every normal moral life. Nor is it possible for anyone to suppose that in the short period of his existence he can discover much that is altogether new in moral experience. In this sphere where men for generations have striven to accommodate their lives to one another, it may well be held by the majority of individuals that

Das Wahre war schon längst gefunden,
Das alte Wahre fass es an.

Even should a custom do little more than impose restraints on the actions of individuals in relation to one another, such restraint involves a measure of intercourse between human beings, and this intercourse, as we have seen, is the sphere of morality.

It is in the light of the foregoing remarks that we should understand what is meant by the formulation of moral laws, and how such formulation has come about. A long tradition of customarily established forms of behaviour lies behind all such articulation of the moral life into moral codes. A time arrives when the orderly ways of behaving become so well recognized that formulation is a natural and a necessary step, so that the formulation gains immediate acceptance. Since the laws carry within them the authority of the distant but forgotten past customary order, the laws take upon themselves the antiquity which they conserve in language. And since the beginnings of the custom lie in the dark obscurity of an age long past, the laws themselves seem to have come out of the

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dim mystery of unknown antiquity and to have been given with the original nature of man—a view which is true in a real sense; and being so given they are held to have come from God. It is most interesting to note how this was interpreted by two such different nations as the Hebrews and the Greeks. The Hebrews with picturesque impressiveness and poetic suggestiveness considered their fundamental moral code to have been given directly by God to the early leader of their people, who received it and wrote it down on tables of stone after an interview with God on the cloud-capped heights of Mount Sinai in the wilderness—the cloud symbolizing the distant and irrecoverable antiquity of the past. The Greeks, with the intellectual penetration and restraint characteristic of their nation, declared that Justice and the moral laws are the unwritten and unfailing statutes of heaven itself to which Zeus and the gods below as well as mortal men are subject. That is to say, the orderly behaviour, to which the formulation of laws gives articulate expression, is part of the constitution of the world. In the familiar lines of the *Antigone* it is said:

Not of to-day nor yesterday but for ever do they live,
And no man knows what time they came.

From every point of view, therefore, it appears that custom is an indispensable condition by which the moral life of the individual is sustained and promoted.

It would be untrue to say that its force and influence are confined to primitive societies, or societies at a low level of civilization. Doubtless in such types of community custom has a wider domain of operation than in the higher societies, where the rule of formulated law plays a much greater rôle than the order of custom. It might in fact be shown that as societies pass from a lower to a higher level of organized life, the transition is marked by the change from the control of custom to the rule of formulated law. For at the lower levels of human society more can be effected by imitation and suggestion, which are characteristic of the operation of custom, than by leaving individuals to apply a law for themselves. But it cannot be denied that in the highest societies much of the orderly life of a community is due to mere customary observance, and not to any knowledge of explicit law. It is doubtful indeed whether law alone could secure order, if respect for customary procedure broke down. Rules would seem to be of little avail where customs altogether fail to gain acceptance. For it is evident that the complex system of laws, by which the higher societies are regulated, is unknown to the vast majority of people to whom they apply and for whose benefit they have been enacted. It is the business of a specialized profession to understand and interpret these laws on behalf of those

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affected by them. The ordinary citizen generally knows less about them than he knows of the rules of his physical health. Yet the mass of the community, though ignorant of such laws, adapt themselves to one another from day to day with relative ease and success. The reasons for this apparent paradox are that customary modes of procedure, apart from laws, continue to guide individuals into orderly ways of adjustment; that customary procedure is partly the basis of law, partly an order of the same general kind as law¹ and partly is but articulated by formulated law; and—a point equally important—that the will to secure the interest of all in the acts of each is the mainspring alike of custom and law.

Another form in which tradition can exert a potent influence on the life of the individual is through the family. This holds of some societies more than others, and of some classes in a society like our own more than of other classes. And it operates both to the advantage and the disadvantage of the individual; but on the whole more in the former direction than in the latter, for the disadvantages appear, when they appear at all, mainly in the form of a certain narrowness of moral outlook which is but the counterpart of the exclusiveness characteristic of family life. Taken all in all, a family tradition is one of the effective supports to the morality of the individual. Its importance is recognized in many ways. In the quasi-religious form of ancestor-worship, the ghostly spirits of past members of the household brood benignant round the altar and the hearth, giving a sense of permanence to the purposes which control the daily life of the family, and animating its component units with a fuller consciousness of their common interest in one another. In another form the resources of art, *e.g.*, family portraits, are utilized to keep fresh in the memory and imagination of the living the features and the character of former distinguished or even undistinguished representatives of the family; and however unsatisfactory such memorials may often be as works of art, their significance as a means of sustaining a continuity between past and present and of promoting morality in the individual life is unmistakable. This may be done by linking his life to a standard of excellence which has been attained by his own kindred; or by affording him the adventitious advantage of vicarious merit; or by merely fostering family pride, which, in its best and even in its worst form, tends to refine and harden the moral fibre in the hour of conflict, and to soften the asperities of moral censure in case of a fall.

Again, there seems little doubt that though an individual's domestic traditions are restricted to what he has gathered from association with his immediate kindred and progenitors, the recollection of their lives can become a permeating influence in his own.

¹ Cp. J. Grote: *A Treatise on the Moral Ideals*, p. 420.

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And the filial piety which leads him to preserve their presence by a memorial, however crude, is an open testimony to the claim which they exercise over him and his loyalty to the purposes of good which he shares with them.

Family tradition operates in the life of the individual in a different manner from custom. The latter concerns action only, and such action as has a bearing on the wider issues of the community as a whole. The influence of family tradition concerns more particularly the feelings and sentiments, the scruples and prejudices, the convictions and even the conscience of the moral agent as a unit in a family group. Example here plays a larger part than either precept or prescription. Respect for the family standards and mode of life embodied in individuals becomes indissolubly bound up with self-respect; loyalty to the family, with the pursuit of individual good; admiration, born of the past achievements of others and nurtured in recollection, with confidence in the special purposes which the individual has accepted from them and shares with them.

Various factors indirectly co-operate to foster family tradition and bring its influence to bear on the individual. The most potent of these, and, where family tradition generally holds sway, the most common, is probably religion and all that this implies. Nothing, in fact, seems to counteract the natural effect of family tradition so easily as the absence of a common religious life, or a discordance, whether open or secret, in the religious life, between past and present, earlier and later, generations of the same family. But where family tradition is most pronounced—and it varies greatly in the incidence and force of its influence—other indirect factors besides religion play a very important part. We perhaps see it at its best in those homes, exceptionally favoured by fortune, by circumstance, as well as by nature, where the family life has been enshrined for generations in an environment of dignity and beauty, which commands and keeps captive the affections as it ennobles the imagination; where the successive representatives have been accustomed to give and receive honour, and to justify their station by the fulfilment of its responsibilities; where selective breeding has combined with moral training to produce a cast of character in which the elementary virtues are tempered and refined to gracious forms of social adjustment appreciated by all but accessible to few; where the resources of art and of knowledge become the ministers of human well-being, elevating social intercourse and adorning the spirit; and where religion itself is utilized as a properly disposed ordinance for consecrating and conserving the stately structure of family welfare. In such cases the power of tradition has certainly its greatest opportunity, and as a rule irresistibly dominates the individual moral life in a manner hardly found to the same extent in

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family groups less favourably situated. In the latter the influence of family tradition is modified more readily by influences drawn from other sources. In the cases above described the individual bears the impress of his domestic group so unmistakably on his character that he seems the carrier and transmitter of an ancestral type of moral life recognizable by all and constant in its main features from generation to generation.¹

In addition to the forms of tradition above discussed, there are certain kinds of tradition which, especially in a highly complex society, indirectly promote union between man and his fellows. It may be said that every kind of invention which assists man's control over the processes of nature settles down into a traditional mode of adjustment to nature. It becomes inseparable from the order of life prevalent in a society, and becomes both a cause and an effect of the continuity of the society and enters into the social heritage of successive generations. Individuals are dependent on the adoption of such a heritage if they are to conform to their society. And when individuals are jointly dependent on the same heritage, they become interdependent on one another. By sharing the same heritage, they are not only knit together, they intensify their common interest in each other, and tend to manifest this sense of community in ways of thought, action, and feeling only remotely connected with the heritage which is the occasion of extended intercourse. Illustrations of this are innumerable. The socially inherited mechanical devices to expedite travel and communication not only constrain individuals to learn how to adapt themselves to these devices and to utilize

¹ It seems worth noting that the family institution is never so stable as in a country where tradition animates its life, and that the absence of the influence of family tradition of some kind on the individuals' moral life is generally an impoverishment of moral resources, and in many cases means irreparable loss. It is also significant that where respect for family tradition wanes, respect for the existing order of family life seems invariably to decline.

Again, where revolutions in society bring the family traditions of any section of the community to contempt or to ruin, the result seems invariably to involve moral chaos in the whole society. Whether the contempt is caused by the arrogance of distinguished families or by the envy and jealousy of the rabble, matters not: the effect is the same. Where, on the other hand, a revolution leaves untouched the family tradition and what it implies, the social order as a whole is not endangered, and the community will quickly survive the upheaval. This observation seems confirmed, if we contrast the course of revolution in France in the eighteenth century with that in England in the seventeenth century, or in France itself in the nineteenth century; or, again, the course of contemporary revolution in Russia with that in Germany in recent years.

A society may survive the loss of its customs and customary traditions, for custom can be replaced by law; but the loss of family tradition undermines the very foundations of the lives of individuals on which all social structures rest.

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them, but make individuals dependent on each other in the process. The devices are not merely means for organizing and facilitating social intercourse; they assist in creating further interest between human beings, and so deepening the sense of social relationship. Common emotions are awakened, common ideas suggested, common actions promoted by the mere fact of using such machinery. Railway and telegraph have not simply facilitated interchange between individuals; they have widened the social sympathies, enlarged the social imagination, increased the boundaries of expectation, duty, and reliance between human beings, not to speak of the expansion of the sphere of rights and obligations in the legal sense. Just as on board ship the temporary association of individuals on the voyage creates a common interest between them, were it for no other reason than their common share in the perils of the voyage and their need for trust in one another; so the machinery of social life, once it becomes part of the social heritage, reacts indirectly but profoundly upon the moral attitude of individuals towards one another.

It has been pointed out¹ that the establishment of a social heritage for the furtherance of human life necessarily modifies, both physiologically and psychologically, the individuals who are constrained to use it. The suggestion is important and is evident on analysis. The moral effect is equally significant. Individuals so modified become not merely increasingly dependent on such a heritage. They become ever more dependent on one another for carrying on the joint enterprise of social life. They are constrained to understand each other; and their understanding is facilitated by the similarity in their composition resulting from the modifications brought about. They are compelled to act together and to correlate their activity; for the failure of one may mean the misery of many. And when specialization of function is in consequence carried to a high point, their social adjustments become almost stereotyped in their regularity and calculability.

An important form of social administration operates in a similar way. Once established, it becomes in a short time a part of the plan of social life which individuals accept as a heritage from the past, and to which they accommodate themselves willingly or otherwise. Their common direct interest in it makes them dependent on each other; its indirect effect upon them is such as to modify and intensify their moral attitude towards one another. Thus, for example, the system of National Health Insurance has not only made those individuals concerned in it more dependent on each other for the effective accomplishment of the system; it has profoundly influenced the sense of the moral value of the individual life, and, in the case of the very poor, has changed the attitude of patient to medical practitioner.

¹ By Wallas: *Our Social Heritage*.

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The last point is as interesting as it is curious. Formerly the visits of the medical attendant were grudgingly accepted as an unfortunate necessity. Their repetition was viewed mainly as a cause of steadily increasing expense, which was borne with reluctance and could be met with difficulty. The life of the patient was estimated in terms of money; the services of the doctor were intrusions of a kind of health police and a tax on the family resources. With the establishment of the new system, the services of the practitioner are claimed as a right instead of accepted as an uncomfortable necessity; the life of the patient is looked upon as valuable for its own sake; and the doctor has come to be welcomed as a friend of the household. These moral results are clearly indirect consequences of a form of administrative machinery which has assumed its place as a part of the traditional procedure of a society.

It would be tedious to deal in detail with the various ways in which different social institutions which arise within a society, affect by their traditions the relations of individuals to one another, and influence the moral life of the individual accordingly. We have but to mention such institutions as old schools of long standing, more especially schools for certain relatively exclusive classes in a community, Universities, Churches (local and national), trade guilds, stereotyped professions. These indicate the several forms in which tradition has been and can still be brought to bear on the individual, shaping his sense of honour, controlling and modifying his moral judgment, limiting or expanding his appreciation of justice in his dealings with his fellows. It would be useless to pretend that these institutions are external to the moral life of the individual. No doubt some of these institutions affect his relations to his fellows less intimately than others. Some are concerned with the acts of individuals only, and it may be acts of a general kind which barely reveal a particular character: some permeate the feelings and are more intimate in their influence on character. But one and all in some degree provide areas of the moral life in which individuals meet, respond, interact, and hold intercourse with one another; and that is the very substance, structure, and composition of morality. The traditions, therefore, which grow up and animate these institutions are effective in moulding the moral attitude of the individuals successively composing them; for tradition is inseparable from institutions, and institutions (as individuals realize more fully the more moral they are) afford the opportunity for the effective maintenance and development of their various purposive relations with one another.

It may be said that there seems little left of the individual, and hardly any place at all for distinctive initiative on the part of the individual, if we abstract from him all the traditions which influence

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his life. Tradition, however, only emphasizes one factor in the moral life—the indissoluble continuity of the moral life of the individual with the *past* of his society. Institutions which live through traditions are constantly being modified, coming into being or passing away; and institutions act and react upon each other within a whole community. Customs are themselves subject to the criticisms of experience, and customs sometimes pass away. "God reveals Himself in many ways lest one good custom should corrupt the world." The moral life of the individual has to do with the future as well as the past; the purposes and needs of individual lives give rise to institutions, modify and extinguish institutions. The existence and operation of law bear witness to the need of other conditions of moral activity than are satisfied by institutions alone. In all these spheres, therefore, there is ample room for the initiative of individuals. And this may be admitted without losing sight of the profound importance of tradition in the individual life, or of the need for cultivating respect for tradition as an essential factor in moral experience.

There is a tradition in men's beliefs, which men acknowledge the more readily because beliefs are strengthened by antiquity; and their adoption by many in the past helps to give them the quality of universality in the present. There is also a belief in tradition from which men cannot in the long run escape, for it is both created and confirmed by tradition itself. It seems the correlate, at the level of the higher mental life of man, of the continuity of the human race. This continuity is secured in the lower planes of organic life in the form of primary instincts operating as functions for the conservation of species. The consciousness of tradition is peculiar to the self-conscious life of man, and its function is to conserve social organization in which man works out his characteristic destiny. The lower organisms face one way only—towards the future; and their instincts operate in the present without prior experience. Man looks after as well as before; and tradition is the way in which in social life he looks backward and avails himself of the experience of others to assist his own in the present. He cannot escape from it if he would realize his capacity for intimate social intercourse with his fellows. The more he knows of himself the more he admits he would not escape even if he could.

MECHANIZED MENTALITY

PROFESSOR JOHN LAIRD

NOBODY should want to rid his mind of science, but why should science want to rid us of our minds? In the name of science, however, clever men have given their minds to that very enterprise, although no doubt with the explanation that they were only ridding us of what we had falsely thought to be our minds. Thus in the eighteenth century La Mettrie presented the thesis that man was a machine. In the nineteenth, Huxley tried to show that we were conscious automata. In the twentieth, Mr. Hogben,¹ among others, professes to deduce from Pavlov's² experimental results that consciousness is a superstition, being only a misdescription of conditioned reflexes. I propose, then, to examine the modish form of this persistent doctrine.

What is claimed, broadly speaking, is that the methods by which men, up to the present, have attempted to understand themselves, their fellow-men, and their fellow-animals have been radically misdirected; that, until recently, there was some excuse for man's failure, since physiological science, except for vague aspirations, had no effective alternative to offer, but that now, after Pavlov has spoken, there is no need to remain unscientific any longer. At long last, three centuries after Galileo, the lynx of science has shaken the last flicker of life out of Cerberus, the decrepit guardian of the gates of superstition.

We should first consider, therefore, what sort of animal Cerberus was, that is to say, what sort of superstition is supposed to be represented by the word "consciousness," and why the term is supposed to designate something thoroughly unscientific.

The substance of the complaint is that "consciousness" is the name of a sham with two delusive roots, one of them called "introspection" and the other called "teleology." The pseudo-science of psychology (old style) is said to be based upon the antiquated superstition that by a hocus-pocus called "introspection" we can discover the "motives" of our actions, and so are able to explain the actions of men (or of cats and dogs) by reference to these "motives." All this verbiage should be jettisoned by anyone who has come to understand the reality of these matters, viz. the truth about conditioned reflexes.

The alleged objection to introspection is that it *must* be unscientific,

¹ In *The Nature of Living Matter*, hereafter cited as *L.*

² See *Conditioned Reflexes*, Eng. trans., hereafter cited as *C.*

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because, by its own showing, it is always a private affair. It is but "inward looking" into one's *own* mind. A pre-requisite of all scientific experiment, however, is that it should be a public enquiry, that is to say, that the observations on which the conclusions are based could be checked, in principle, by anyone. (I say "in principle" because laboratories may be too expensive to be thrown open to the public, and because untrained observers might be quite unable to see that anything significant was happening in them.)

The objection to teleology, that is to say, to purpose and to volition, as a canon of explanation, is (we are told) that it could never explain. Science knows that there is only one way of explaining natural facts, viz. the push and pull (or is it only the push?) of mechanical forces. That is the very meaning of scientific determinism. "Telcological" explanations are indeterministic, animistic crudities. They are makeshift expedients in the way of explanation, and are quite incapable of enduring any prolonged scientific strain.

Such, then, is the accusation; but it is also important to observe why the dawn at last is said to be breaking and the glorious hour arrived for putting an end to Cerberus and his activities.

According to Pavlov (*C.*, 3), the reason for our prolonged immersion in crepuscular pseudo-science was the backward condition of physiology, and, more particularly, of the particular department of physiology that deals with the central nervous system. It was only about 1870, Pavlov says, that Munk, Ferrier, and others began to study the effects of surgical extirpation upon the cerebral hemispheres of animals, and although these investigators claimed that they had been able to demonstrate the localization of psychical functions in the cortex, it was obvious that such rough and extravagant presence-or-absence methods could scarcely expect to demonstrate how the hemispheres functioned in detail. (As Pavlov says, one could not learn much about the mechanism of a watch if all one could do experimentally was to drill largish holes in various parts of it.) Even after 1870, therefore, (according to Pavlov) physiologists in fact had recourse to other, *i.e.*, to introspective, methods in their study of man's higher nervous functions, and had to think of the other higher animals on analogy with mankind. Indeed, the scientific part of physiology at that time began and ended with the study of the reflexes of the lower nervous paths. But the new experiments upon conditioned reflexes changed all that. They proved that "scientific" methods could be applied to the entire nervous system, that is to say, to all nervous process that (as we used to say) subserved every mental function. Hence (according to Hogben, for Pavlov is much more cautious, although I think he means much the same thing) we can now "mechanize" consciousness in all its operations, and bury the remains of Cerberus in quicklime.

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I have said that Pavlov is more cautious than many of his followers. "It would be the height of presumption," he says, to quote but one of many similar passages, "to regard these first steps in elucidating the physiology of the cortex as solving the intricate problems of the higher psychic activities in man, when in fact, at the present stage of our work, no detailed application of its results to man is yet permissible" (C., 395). Even regarding his dogs (poor things) he was "not concerned with the ultimate nature of excitation and inhibition as such" (C., 377); and he speaks (C., 330) "with the utmost reserve." Mr. Hogben, however, shows no reserve at all. The traditional distinction between reflex and voluntary activity, he says (L., 41), has been finally abolished. "Conscious" behaviour should simply be called "conditioned" behaviour (L., 48). Common-sense "consciousness" should be "disintegrated" into reflexes; and the phenomena of learning, of memory, of attention, and the like need no longer be treated as somehow peculiarly "mental," or regarded in the bad old unscientific way. He admits, of course, that much in detail remains to be done, but claims that, on the major issue, the battle has been won. It is this general claim that I want to examine (if I may be permitted to use the meaningless, because unscientific and teleological-introspective word "want").

It should be noted, to begin with, that Mr. Hogben's larger objections to introspection and to teleology do not seem to be very strong. I can never feel anybody's toothache except my own; but the privacy of one's toothache seems a slender reason for denying that there is any such thing as toothache. In a disreputably unscientific way, toothache seems nevertheless to exist; and since most scientific gentlemen inform us that all our perceptions vary from individual to individual, it may be doubted whether, strictly speaking, *any* experimental observation has the sort of publicity that Mr. Hogben claims for all such evidence. Introspection, then, does not seem to be wholly discredited by Mr. Hogben's arguments (however it might fare with other arguments), and the attempt both of Hogben and of Pavlov (C., 6) to claim that teleology is a superstition *because it is indeterministic* seems clearly to have been conceived in error. I shall not stay to consider the obvious retort that Sir Arthur Eddington and other distinguished modern physicists assert that determinism in physics is a superstition in theory and a nuisance in practice, and I am willing to argue on the assumption that these distinguished writers are wrong. What interests me more is Mr. Hogben's ungrounded assumption that teleological methods *are* necessarily indeterministic. Even the animal that Mr. Hogben seems to consider the most ludicrous of all Nature's charlatans—I mean a "regius professor of moral philosophy"—may consistently (so far as I know) be both a teleologist and a determinist. Certainly many of

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them profess to be both; and the reason that Mr. Hogben adduces, namely, that *prediction* should theoretically be possible, is, so far as I can see, no sort of objection to teleology. Most teleologists, I submit, make pretty confident predictions about the movements of railway trains on grounds that are very largely teleological, viz. that engine-drivers, from wage-earning motives and from the desire to do their jobs efficiently, try to run the trains according to schedule, and, again, because a sufficient number of moderately opulent people want and expect a good train service. Is it likely that Mr. Hogben, from his scientific non-teleological data, would be able to predict these matters with greater accuracy?

Let us pass, however, to less metaphysical contentions and consider the more specific arguments of these authors, viz. that ever since Descartes¹ in the early seventeenth century (see C., 7) physiologists could deal with reflexes in their own scientific, non-introspective, non-teleological way, but not, in this way, with memory, learning, and other such functions; that now they *can* deal with them; and, consequently, that a change of infinite importance has occurred.

This broad argument has several subdivisions, and it seems advisable to deal with each of them in turn.

(1) In the first place, it is claimed that purely objective methods are used. Hence the inference appears to be drawn that no facts except objective facts occur.

Plainly, however, no such conclusion follows. In the simplest instance of a conditioned reflex the facts are as follows: A dog salivates when food is set before him. That is a natural or unconditioned reflex. He can be trained to salivate to the sound of a gong if the gong is frequently sounded at dinner-time. That (when the gong is sounded without the dinner) is a conditioned reflex. Gong and dinner are quite objective, and so is the salivation (which can be carefully measured if the dog, by a surgical operation, is made to dribble at the side of the mouth instead of salivating in the ordinary canine way). It does not follow, however (whether or not it is true in fact), that everything that occurs is objective because the stimuli and the measured reaction are objective. A mother slaps her child and the child weeps. Measure the lachrymal flow if you like, and you will never prove that pain does not occur, or produce the smallest piece

¹ The most recent English expositor of Descartes (Mr. S. V. Keeling in his *Descartes*, p. 259 n.) states that the term reflex "appears to have been coined by Willis (1699), and not until 1784 was the general theory of reflexes at all fully elaborated (viz. by Prochaska), but in what consists the difference between voluntary action and unconscious reflex was first stated definitely by Marshall Hall in 1833." Mr. Keeling also notes (*op. cit.*, p. 260 n.) "how strikingly far" Descartes in his *Passions*, art. 50, anticipated the language of "conditioning."

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of evidence regarding the question whether pain is subjective or objective. To be sure, the dog does not report his subjective condition and the child might (although, even then, the report would consist of objective noises); but the dog's silence about introspective matters can scarcely be regarded as a striking modern discovery.

(2) The complaint that in what I may call the dark, pre-conditioned ages ignorance compelled even physiologists to become unscientific regarding the higher nervous centres requires appreciable modification. Certainly common sense does employ introspective-teleological methods, and does attempt, by analogy, to apply similar canons to the behaviour of the higher animals. Certainly, also, if no other methods were available, these would currently be employed. It is not true in fact, however, that persons who used this method necessarily inferred that if we knew everything (or even enormously more than we do) about the nervous system, we should still have to invoke a new, unneural and, as it were, disembodied "mental" series of causes. If we believe ourselves to know from experience that when people want anything very much they commonly try to get it, it does not follow that we deny the very possibility of a physical interpretation. The state of affairs in question would be *compatible* with an intransigent dualism (*i.e.*, with the theory that mind and body are totally and for ever disparate in their nature although capable of entering into a temporary partnership); but it does not *require* that theory. Indeed, dualism was only one of the reigning hypotheses in preconditioned days, and it was not the favourite hypothesis, since either some form of identity-hypothesis or else the double-aspect hypothesis was more usual.

Those who accepted the identity-hypothesis commonly held that mind was a form of body, for they seldom maintained that body was a form of mind. In short, they divined what Mr. Hogben and perhaps Mr. Pavlov profess to be able to see. Those, again, who accepted the double-aspect hypothesis advocated a doctrine of psycho-physical (or, more accurately, of psycho-physiological) parallelism. For them, the two aspects, *ex hypothesi*, were aspects of the same thing, that is to say, of something which, in one set of features, was just a living organism. No doubt if, like Mr. Hogben, we reject all introspective teleological methods, then we do reject psycho-physical parallelism; for, according to that theory, the same thing may be studied (in principle) *either* by an introspective-teleological *or* by a physiological method; and Mr. Hogben spurns the former. The theory, however, did not deny the sufficiency of physiological methods in principle. It even hoped that appropriate methods of this order might be discovered. What it did deny was only that teleological-introspective methods were either meaningless or useless.

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(3) Particular attention should be paid to the contention that the discovery of conditioned reflexes supplies convincing proof of the unity of voluntary and of involuntary action.

The argument is (a) that voluntary action, in fact as well as in name, must be known introspectively (and not otherwise), must be teleological (if anything is teleological), and must be unscientifically indeterminist (if the human will be "free"); (b) that reflex action is opposed to voluntary in all these respects. Therefore, if so-called voluntary action is a conditioned reflex, that is to say, a species of reflex action, the introspective-teleological psychology is instantaneously deflated.

In examining this contention I shall not add anything to what I have already said about determinism, and shall postpone the consideration of conditioned reflexes; but I should like to direct the reader's attention to the rest of the argument.

Clearly, the name "voluntary" was selected for introspective reasons. A "voluntary" action is the sort of action that a normal healthy man can perform instantaneously, or at any rate very promptly, whenever he chooses to do so, and, as we say, just because he chooses to do so. Thus nearly anyone can rise, salute, cry "Heil Hitler!" (and so forth) by merely trying to do it; and we learn by introspective experience what actions are in this way at the behest of what we call our "will."

If we were as ignorant about our bodies as plain men commonly are to-day, and as the ancients necessarily were, we might have to admit that the sum of our knowledge about such matters was simply that a conscious intention was (so far as we could tell) the occasioning cause of such movements. What is more, even if we learned from the behaviour of paralytics, and from surgical evidence regarding lesions in and excisions from the brain, that a certain physiological condition of the nervous system was *also* necessary for effective volition, we should still have to say that, although a conscious intention could not be a *sufficient* condition for successful voluntary action, nevertheless it was *one* of the conditions known to experience, and indeed (in the existing twilight of this department of physiology) the only partial condition that we could specify with certainty and with precision. From this point of view the name "voluntary" meant a great deal more than simply a misleading residue of obsolescent theory.

Per contra, at least two other points should be noticed in this connection.

In the first place, it was never maintained that all movements of the sort we call "voluntary" were necessarily caused by a subjective volition. A "voluntary" movement was simply one that, in certain cases, *might* be subjectively initiated. A man can blink if he chooses;

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but he also blinks involuntarily if he encounters a bright light, or a moving branch near his eyes. To utter a word is usually voluntary; but it may occur in sleep without any evidence of volition. Indeed, although we usually think that a "voluntary" action can at least be inhibited by volition (for even a sot, unless he is wholly depraved, can refrain from raising the glass to his lips), we could not insist upon this condition (as is plain from the instance of blinking). It is no new discovery, therefore, that certain "voluntary" movements *might* be made involuntarily.

In the second place, to elaborate what has already been mentioned in passing, it has been known for a very long time that introspective methods by themselves were insufficient in this affair (from which it would not follow that they were either useless or completely unreliable). Paralysed persons make the volition, but the expected movement does not occur. In certain hysterical disorders the patients, let us say, believe that they cannot move a hand (which, according to their ideas, terminates at the wrist), although they *can* move the muscles of the forearm that do in fact cause certain movements of the hand. In practice, therefore, all psychologists and most regius professors of moral philosophy were fully prepared to admit that our introspective ideas about these matters might lead us sadly astray; that for physiological purposes the term "voluntary" should, whatever its origin, be regarded most conveniently in a psychologically neutral way as primarily a name for the skeletal musculature, with special reference to the higher nervous centres; and that, even for psychological purposes, this neutral extension of the term might frequently be appropriate.

A few psychologists and philosophers, it is true, maintained that our introspectively voluntary movements were *intelligible* in a sense in which other movements were not. If, they said, we wanted to do this or that, *and did it*, then (and not otherwise) we could understand *why* we did it. In other instances the movements seemed simply to happen, although, *après coup*, we might sometimes be able to give an extrinsic reason for the event, either "mechanical" or adaptive (as, *e.g.*, the protection of the eye by a blinking movement). The general opinion, however (and, as I apprehend, the correct opinion), was that this supposed "intelligibility" was itself an inference from repeated experience. We discover by experience what parts of our frame can be moved by merely trying to move them, and what parts cannot; and we should not pretend to ourselves that we ever know *why* the movable parts move when we try to move them and the others don't. Most of us can waggle our toes, and very few can wiggle their ears; but what sort of self-evident reason could anyone pretend to allege for the universality of voluntary toe-wagging and for the rarity of voluntary ear-wiggling?

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(4) The substance of the new contentions, however, is positive rather than negative. It is not so much a question of what consciousness, or some factor of which consciousness is an aspect, cannot do (although that is a part of the argument), as an alleged demonstration of the competence of reflexes for all "mental" functions previously regarded as *not* reflexes. When, for instance, Mr. Hogben speaks about "mechanizing consciousness," he means that the functions previously ascribed to "consciousness" may now be ascribed to reflex action, and that reflex action is mechanical. Has this claim been substantiated?

Mr. Hogben admits (*L.*, 36) that the term "reflex" may be used in various senses, but he lays emphasis, for the sake of his argument, on the sense of "reflex" in which it is a completely uniform localized response, through the nervous system, to (the same) local agent; and he illustrates it by the way in which a "pithed" frog, with its cerebrum surgically excised, withdraws its leg when its toes touch water heated to about 40° C.

It is only in this sense that a reflex is, properly speaking, "mechanical," or as we say "automatic"; and we all know, even from looking at the matter from an introspective standpoint, that we do have these reflexes. When we are aware of such a reflex (as of the knee-jerk when a doctor tests us) we regard it as something "automatic" within us, something that explodes like a pistol when the trigger is pulled, and is essentially the same response whether or not it is a sensation-reflex, that is to say, whether or not we are conscious of it when it occurs. A sneeze, for example, is a reflex of which we are usually conscious. Indeed, we may even have a limited voluntary control over our sternutations. In the main, however, sneezes are in- or at least non-voluntary. Their occurrence is one of the staple devices of novelists whose plot requires that some eaves-dropper should be detected.

Seen from this angle, Pavlov's choice of salivation as an instance of reflex action was skilfully chosen. We believe ourselves, indeed, to know from experience that ideas may stimulate the flow of saliva as well as actual smells or tastes. Our mouths may water from the reading of cookery books; and it is conceivable that we might learn to control this function almost as well as most people can control their tears. Since, however, we have not been made to dribble visibly like Pavlov's dogs, none of us has seen the advantage of learning to control this private manifestation of greed, although we have all seen the advantage of restraining our tears. Therefore we commonly consider salivation as an obvious instance of a "mechanical" reflex, and do not even speculate whether an open-mouthed dog is precisely parallel in this particular to a habitually close-lipped man.

Common sense, then, and also common psychology, is quite familiar

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with the occurrence of "reflex" or, in the old general phrase, "automatic" actions, whether they occur singly, as a sneeze usually does, or occur in a chain like masticating, swallowing, etc. Moreover, common sense and common psychology were perfectly familiar with what used to be called "secondarily automatic" action, that is to say, with action that *became* "automatic," although it had not always been so. For example, a human being that has learned to walk may walk thereafter quite inattentively, as J. S. Mill is said to have done in the horse traffic of London when all his conscious thoughts were employed about his *Logic*. Similarly, a man who has learned to stand may become capable of sleeping on his feet.

The part of this phenomenon that chiefly interested old-fashioned psychologists was the circumstance that the attentive consciousness that (in certain cases) had once been necessary might become wholly or almost wholly otiose. When we had to learn, say, to dress ourselves in the morning, we had to attend rather carefully to many of our movements and had to *try* to execute the difficult ones. Having learned, we became able to think of other things while we were dressing, and even, like W. S. Landor, might find that our happiest thoughts and phrases were likely to occur to us at such a time (unless, I suppose, a stud proved refractory or a button gave way). It should be noticed, however, that few, if any, ever said or thought that *all* secondarily automatic action had originally been "conscious." For it was the same sort of phenomenon as learning to breathe easily at an unusual altitude where there need be no conscious adaptation.

Facts of this kind were frequently consistent, however, with the presence and presumed operation of consciousness, although they might also be consistent with its absence. The essential new question is whether the old-fashioned explanation of the species of secondary automatism that was supposed to be derived *via* previous conscious attention should now be held to come by a different route. Can we learn *this*, as well as many other important things, from Pavlov's skillful and beautiful experiments?

To speak temperately, I cannot see that the experiments *constrain* anyone to draw this conclusion. As we have already seen, the mere fact that a dog which, when untrained, salivates when presented with food, may be trained to salivate at the sound of a dinner gong, is, in itself, no proof that the dog does not mentally and consciously associate gong with dinner when this trained reaction occurs. Pavlov records the beginning and the end of the process. For all he shows to the contrary, the intervening process (in these instances) *might* require consciousness; and he admits (*C.*, 322) that surgically brainless dogs cannot be trained in this way (or only to an inappreciable extent). In short, this particular question concerns what

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Pavlov expressly refuses to discuss, viz. "intricate problems of the higher psychic activities in man," or at least of those "higher" activities that may be neural but are commonly called "psychic."

Mr. Hogben's argument, however, is precisely that Pavlov has shown that there need be nothing except reflex action in a host of cases (indeed, ultimately in all cases) in which it was formerly supposed that factors quite different from those involved in reflex action had to be operative. The dog, we all supposed, remembered, expected, or imagined his dinner when he heard the gong. *Therefore* (we used to infer, from experience if not from insight) his mouth watered. What has now been shown, according to Mr. Hogben, is that the whole process, at every stage of it, was reflex or automatic.

If so, the argument is stringent only if the term reflex is carefully defined and invariably employed in the same sense. If the term were used quite vaguely and generally, the conclusion would be equally vague. In particular, if the term were used in a sense so wide as (a) *not* to preclude, or even (b) as to *include*, introspective-teleological implications, the argument, by implication, would recoil upon Mr. Hogben's mechanical head. And I propose to show that Pavlov's argument does both these things. Indeed, I shall contend that instead of mechanizing or extruding *consciousness*, Pavlov has been forced to loosen the definition of *reflex* in such a way that the narrow, "mechanical," or "automatic" implications of a "reflex" disappear and are replaced, in an undeniable way, by what Mr. Hogben would call teleological or introspective characteristics.

(a) The first point can be readily demonstrated. Pavlov draws no effective distinction between a "reflex" and a general "reaction" (e.g., C., 12); and certain at least of the reactions that he calls "reflexes" are of so general a description, so varied in their manner and mannerisms, and excitable by such a multitude of different causes, as completely to contradict the sense of "reflex" in which it is fixed, "mechanical" or "automatic." Thus (C., 12, and elsewhere, he speaks of *the* "investigatory reflex" (C., 11, and elsewhere), of a *special* "freedom reflex" (C., 17), of *the* "defence reflex," and even (C., 31) of "the reflex of self-preservation, of existence or non-existence, life or death." It is obvious that such language is quite hopelessly vague, and that *such* "reflexes" are not at all comparable to the precise and invariable piece of routine according to which the "pithed" frog withdraws his foot from water heated to 40° C. What could *the* "life or death reflex" be except *all* the varied actions that assist survival—avoiding poisons and traps, overcoming a dangerous adversary in fight, eating when famished, etc.? How could this multitude be *a* reflex? And how does Pavlov count his reflexes when he *also* speaks of *the* reflex of "passive self-protection" (C., 410)?

Similarly, *the* investigatory reflex is said to include sniffing, gazing,

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pricking up of the ears, etc., in short, any one of the very numerous reactions appropriate to what old-fashioned people called curiosity; "the freedom reflex" would be exercised (in a most varied way) where any sort of physical constraint was exercised by stone walls, iron bars, gyves, stifling air, or any other similar impediment. There is here no question of a "reflex" in the narrower sense into which "mechanical" implications are naturally read, that is to say, no question of a single uniform response to a single uniform stimulus; and the language employed implies an amazing system of book-keeping according to which overcharges are possible *ad lib*, because no precautions are taken against counting the same "reflex" several times over. Thus, blinking the eyes, a reflex in the narrower sense, is *this* reflex and *also* (it would seem) an instance of *the* eye-preserving "reflex," and *also* of *the* "life-preserving reflex" (if the threatened injury be serious). Fighting, again, would be ascribed both to *the* "defence" and to *the* "self-preservation" reflex, and each particular device in the fight, such as gripping the enemy's ear, would be ascribed to the ear-gripping, the defence, and the life-preserving reflex. Vagueness could scarcely go farther.

(b) In his vehement desire to avoid "fantastic speculations as to the existence of any possible subjective state in the animal which may be conjectured on analogy with ourselves" (C., 16), Pavlov argues that the function of "signalling" is purely "reflex" (C., 24), and even says that *all* his conditioned reflexes are instances of "the" signalling reflex (*ibid.*). Such language, however, is patently subjective or mentalistic, as is his reference (C., 244) to "an efficient and watchful signalman." It contains, quite precisely, the very introspective and teleological implications that Mr. Hogben deplors. No doubt we speak of "automatic" signals (such as fog-signals on a railway). Nevertheless, a signal implies a mind that can read it and also a mind that gave it. There would be no signalling in a mindless universe, although there might be green light, and yellow, and red. The most we could say of a "mindless signal" would be that it *would* be a signal *could* anyone have the wit to interpret it. Pavlov's language about signalling (and it describes a central, not an incidental part of his theory) is to the full as metaphorical as the common statement that "the clouds promise rain." It is we who infer the rain. The clouds do not promise at all. And the mechanistic philosopher Hobbes, when he made this comment, had a story to tell that should have been noticed by these modern mechanizers.

"Signalling," again, is not merely "introspective." It is also "teleological"; and Pavlov stresses the point when he repeatedly explains that signalling is biologically advantageous (C., 110, 152, 312, 321)—a conception that Mr. Hogben, in what (I think) is the ablest part of his very able book, stigmatizes as non-explanatory,

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unscientific, and antiquated. If adaptation to the environment is not teleological, nothing is teleological. Therefore if mechanism and teleology be opposed, Pavlov is not a mechanist.

In short, Pavlov's argument, instead of mechanizing all consciousness, de-mechanizes many "reflexes"; and I shall conclude this discussion by mentioning some further points concerning his account of "reflexes" and of the relation between conditioned and unconditioned ones.

(*a*) If by a "reflex" is meant *the same* "automatic" response to *the same* set of causes, it is evident that "conditioned" and "unconditioned" reflexes cannot *both* be "reflexes," since, *ex hypothesi*, we obtain, in their case, the *same* response to *different* stimuli. No doubt, in a telephone system, different people, at different times, may ring up the same number; and the nervous system can be compared to an elaborate switchboard. In that case, however, the onus of explanation is laid upon what Pavlov does not discuss, viz. the nervous (or other) events that intervene between stimulus and response.

(*β*) If, like Mr. Hogben, or like Pavlov (*C.*, 105), your explanation is based upon the *regularity* of the response, then it is true that unconditioned and conditioned reflexes (when the latter have been formed) are both quite regular. According to the same argument, however, there is a period of irregularity (when the conditioned reflex is in process of formation). Such irregular behaviour, by definition, would *not* be "reflex"; and therefore there would be *some* behaviour that was not reflex.

(*γ*) In general the terms "conditioned" and "unconditioned" reflex would have been unfortunately chosen even if there had been no strong objection to the chameleon-like properties of the word "reflex" in these arguments. Obviously Pavlov does not mean that an unconditioned reflex has *no* conditions. He means only that it is "inborn" or "natural"—and neither of these adjectives can be regarded as very precise. Indeed, Pavlov himself is very guarded in his praise of his terminology (*C.*, 25, cf. 26). He admits that other terms of "arguably equal merit" might just as well have been used, and he even says that one of the uses of the word "conditioned" (*C.*, 68) was "only justified by historical considerations." A "conditioned reflex," indeed, is simply one that has a *special* and, in the experiments, an *artificial* condition.

Moreover, it may be doubted whether the new term "conditioned reflex" is not inferior to the old term "secondarily automatic," and, although names seldom matter very much, it seems just worth while to call attention to one respect in which the older terminology was preferable to the new, because it was less question-begging. When we speak of "secondary automatism" we speak of a process that

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has become "automatic," although it was not always so, and we do not commit ourselves to any special theory of the causes which preceded the newly acquired automatism. We certainly do not infer (as Mr. Hogben, it would seem, would have us infer from the mere word "reflex") that the new, induced automatism was the product of older automatisms and of nothing that was not automatic.

The best descriptions are those that do not say more than they mean.

GREAT THINKERS

(III) ARISTOTLE

I

PROFESSOR J. A. SMITH

IN the history of human thought the name of ARISTOTLE must be written in capital letters. Of few of the Great Thinkers of history is it so true that he was one of what William James called "the folio editions of mankind." In speaking of him, whether in praise or dispraise, it has been found almost impossible to avoid superlatives. The later ancients ranked the disciple level with his master Plato as occupying the twin summits of philosophical attainment. Since then they have divided the allegiance of the thinkers of the Western World. No doubt it is a rather wild judgment of Coleridge's that every man is born either a natural Platonist or a natural Aristotelian, but it is scarcely an exaggeration to say that no man has attained any width of knowledge or depth of reflection who is not driven to recognize, and often to express, a preference for the one over the other. The scales of their influences have, in the course of the more than two millenia that have elapsed since their death, gone up and down. For long it looked as if the verdict of history were to be decisively in favour of Plato, and this is reflected in the habitual epithets applied to the one and the other: Plato was 'the divine Plato'; Aristotle was "the miraculous or marvellous Aristotle." Plato was divinized, if not deified; Aristotle was reckoned the most exalted of human beings. When, after some 1,500 years, the centre of European thought passed from the East to the West of Europe, and the Platonic influence waned, the estimate of Aristotle was more warmly expressed.

To the great Arab commentator Averroes (Spain, 1126-1198), Aristotle was "the rule and standard which Nature had invented to show forth the ultimate perfection of humanity"; his intellect was "the end and consummation of the intellect of Man," and "his teaching" consequently "the height of truth." The chief Christian systematist of philosophy, St. Thomas Aquinas (1227-1274) carried out a conscious and deliberate reconstruction of philosophy and theology in accordance with the principles and methods of Aristotelianism which made a deep and lasting impression upon his contemporaries and the later Scholastics. Even Roger Bacon quotes with approval the words of Averroes: to him Aristotle is not only "the most learned of philosophers," he is "*the* philosopher." Dante

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reflects this judgment in his characterization of Aristotle as "*il maestro di color chi sanno*" ("the master or teacher of the wise," the philosophers' philosopher). No doubt during the Middle Ages the ecclesiastical authorities had frequently expressed disapproval of what they regarded as excessive laudation of Aristotle, and various thinkers from different points of view had protested against it, but upon the whole the influence of Aristotle was dominant over that of Plato, which reached them only indirectly through St. Augustine and certain Neo-Platonic sources. St. Thomas, *e.g.*, was well aware that at a critical point in the history of philosophy Aristotle had "proceeded by another road" than his master's, and to him (as to Dante) Plato is a reverend but secondary figure in "the philosophical family." He was a declared opponent of Platonism in the form in which he knew it.

There is no real revolt against the dominance of Aristotle till the rebirth of Platonism in Italy (fifteenth century), but the whole spirit of the Renaissance was hostile to Aristotle. But as the Platonism which the Humanists took under their protection was a perversion of that of Plato, the Aristotelianism against which they inveighed was a distortion of that of Aristotle. The more sober and sane judgment of modern times has abandoned the exaltation of either at the expense of the other, and, while it is still a favourite commonplace to contrast them, it is no longer the practice to claim for either the sole right to the philosophic throne.

We may, therefore, be content, without any derogation from Plato, to recognize the enormous influence which Aristotle exercised, and still exercises, in the shaping of men's minds.

Since Aristotle's death some twenty-two centuries—more than two millenia—have passed. His life (384 to 322 B.C., sixty-two years) falls in a period of the history of Greece concerning which our information is not as full as could be wished, and our ancient authorities for it are not of the first rank of historians. The early part of the period was occupied with the struggle between Sparta and Thebes, which ended in the defeat of Sparta at Leuctra; the middle part by that between Macedon and Athens, which ended with the defeat of the latter at Chaeronea; and the last part by the conquests of Alexander (who died in 324). Within it fell successively the careers of Agesilaus, Epaminondas, Pelopidas, Demosthenes, Aeschines, Alexander. Von Wilamowitz has attempted to furnish a panoramic picture of this background of Aristotle's life. Of that life itself we have no full or trustworthy ancient account: the professed biographies which we possess are of little worth, and we must here confine ourselves to an outline.

Aristotle was born about 384 in Stagira (or Stagirus), a town on the peninsula called the Thracian Chersonese. His father,

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Nicomachus, came of a stock of hereditary physicians, and had been court physician to the king of the neighbouring kingdom of Macedonia. Aristotle's parents both died while he was quite young, and his education was guided by his relative and guardian Proxenus of Atarneus in Mysia (North-West Asia Minor; it included the Troad). In his eighteenth year he went to Athens to attend the Academy which Plato had founded and controlled. There Aristotle remained, first as a scholar, and then as a teacher, for twenty years (until the death of Plato in 348). We may wholly disregard the gossip that has reached us of differences and even quarrels with his master, of whom he never speaks but with friendship and reverence. During this period he seems to have made no claim to independence of thought, but acknowledged himself an orthodox or faithful Platonist.

In 348, with Xenocrates, he quitted Athens and settled at Assos in the Troad, where he joined two other Platonists. There also he found a friend and patron in the prince of Atarneus, Hermias. At Assos these Platonists founded and carried on a sort of branch of the Athenian Academy. There Aristotle, who had married a niece of Hermias, stayed some three years, and then changed his residence to Mytilene in Lesbos (345). This Assos (or Assos-Mytilene) period was a very important one in his mental development: in it (at the beginning of it he was about thirty-seven) he seems to have increasingly realized certain fundamental differences from Plato and the more orthodox (or conservative) Platonists, and begun to feel and assert his own independence and originality—singularly late for so powerful a mind. When he was at Mytilene there reached him (343) an invitation to become tutor to the young Crown Prince of Macedonia, Alexander (then thirteen years old); he accepted it and moved to the court at Pella. His instruction of Alexander does not seem to have amounted to much: it was probably fitful and subject to many interruptions, and it came to an end in 336, when Alexander succeeded to the throne. It is possible that Aristotle had already retired to his native Stagira, but in 335 he returned to Athens. There he did not rejoin the Academy, but founded a similar institution called the Lyceum (it was also called "the Walks," *Peripatos*, and the members of the school were usually called from it "the Peripatetics"). As neither Aristotle nor his successor in the headship of the School was an Athenian citizen, they could not legally acquire the site or own the building on it, and its character required a rather elaborate provision of such. Superficially (and in the eyes of the law) the institution had the character of a religious community. Less superficially, it was an institution for the higher education of Greek youths from all parts of the Greek world. But also, like the Academy, only much more so, it was a company of advanced students, occupied in research, in the collection and

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arrangement of scientific observations and historic documents, and generally in the extension of all sorts and branches of knowledge. Over their co-operative labours Aristotle himself presided, inspiring, organizing, and guiding them, training the many highly competent colleagues who collaborated with him. With their aid he accomplished results which in their range and variety are no less than astounding. The Lyceum realized almost all the ideals that have ever been entertained of the work of a university. One important result of Aristotle's devotion to this work was that his properly literary productivity (which had earlier been considerable) ceased. The works he composed in this period—and they are the only works of his which have reached us in anything but fragments—are treatises intended to be read not by a general public, but by students, learners, and teachers in the Lyceum itself. It would be no exaggeration to say that they are intended to be “read,” but we must remember that at that time (and for centuries after) “read” meant “read aloud to listeners.” We must not think of them as in any way “published” or meant for “publication.” In this respect the works of Aristotle that remain to us are wholly different from those that we have of Plato, or the fragmentary earlier works of Aristotle himself. Of what Plato *taught* in the Academy we have scarcely any direct evidence, while we have very full and detailed evidence of what Aristotle taught in the Lyceum. It may be added that from the death of Theophrastus in 288 until about 86 B.C. all this body of evidence for the doctrines of Aristotle passed out of reach or sight even of the members of the Lyceum. It was unknown, *e.g.*, to Cicero. It was again lost to the Western world till the thirteenth century, when its rediscovery led to a remarkable and enduring restudy and revival of these doctrines. That revival was an endeavour to recover the whole treasury of ancient wisdom, and frankly acknowledging the enormous value of the results of pre-Christian thinking to appropriate that all but lost heritage, and build it into a new and greater structure of Christian philosophy. It was an attempt viewed at the time with much suspicion and alarm, but it won its way to wider and wider acceptance, and in the main it is still the officially endorsed and recommended philosophy of the Catholic Church, or at least of the Roman Church. Of that philosophy it may be said that it is avowedly Aristotelianism Christianized, completed by doctrines of Christian or revealed origin, but in that completion not substantially altered, the union between the two being, or being regarded as being, a co-operation of natural allies. From an early period there was another current on which the alliance of specially Christian thought was with what was, or was believed to be, Platonism. But the historian of philosophy must recognize that this latter current was the more fitfully

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flowing and less dominant of the two, and so, that the Aristotelian was the central one. If for no other reason than this the philosophy of Aristotle, as we find it in, or can extract it from, his works which remain to us, is of prime importance.

The literature which contains the record of the innumerable attempts so to extract it and to restate it in a form adapted to the needs of later students is of enormous extent. Some idea may be gained of it from (say) the separately published list (1884) of the works in the British Museum catalogued under the heading "Aristotle," which fills 110 large folio pages, or from Mr. M. Schwob's *Bibliographie d' Aristote* (1896), which enumerates nearly four thousand separate works. (It must be remembered that while some of the entries are of pamphlets, very many consist of several folio volumes.) From the death of Aristotle (or at least from the beginning of the Christian era) there has flowed a swelling flood of editions, paraphrases, commentaries, restatements and reinterpretations of Aristotle, and it still flows abundantly.

Before entering upon my main task—that of giving to my readers some idea of this philosophy—I must complete what I had broken off—the record of its author's life. The sudden death of Alexander in 323 produced a crisis in Aristotle's life, and exposed him to personal danger. Rather than, as he is reported to have said, give occasion to the Athenians to sin a second time against philosophy, he withdrew from Athens, and retired to Chalcis in Euboea, where about a year later he was carried off by a fatal illness. We possess the text of his last will, which is mainly occupied with certain arrangements about his family. (He had perhaps earlier nominated Theophrastus to succeed him as head of the School.) In his will he makes provision for his "companion" Herpyllis, for the guardianship of his son Nicomachus and a daughter, ordains the enfranchisement of some of his slaves, and gives directions for the commemoration of some deceased members of his family, in a way which leaves a pleasant impression of his personality. We may safely neglect all the gossiping anecdotes to his discredit which have filtered down to us. Professed portraits of him are not uncommon among statues remaining to us, but they are too late to be of much value as evidence. A literary tradition, to which we may perhaps attach more weight, tells us that (like Alcibiades) he pronounced τ as l , that he had thin legs and small eyes, that he wore striking garments and rings and had his hair cut short. There is no harm in our carrying with us this picture of the man, or any other that we may frame following in the wake of the ancient statue-portraits of him, or even such idealized representations of him as Raphael's in "The School of Athens." No harm, but not much good either.

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In passing from such externalities to a deeper view of the personality of Aristotle we may use as a kind of bridge a passage from Goethe, where he, contrasting Aristotle with Plato, thus characterizes him: "Aristotle's attitude to the world is that of a great master-builder. Here is his station; here he has to work and create. He studies the ground, but only until he has found a solid foundation. What lies beneath, from the surface to the centre of the earth, is indifferent to him. He draws around the site of his proposed edifice a gigantic circle, collects materials from all quarters, arranges them, piles them up, and so rises aloft like a pyramid, while Plato soars heavenward like an obelisk or a pointed flame."

The impression thus conveyed to us by so highly competent an observer is that Aristotle's mind was one of extraordinary range or sweep. The description seems indeed to qualify this praise with hints of certain limitations in width and depth of view, but upon the whole it attributes to Aristotle a design to furnish himself with a prospect over the whole field of human experience, excluding nothing within it from his view as trivial, common, or unclean. The impression is justified, and we may add to it that he pursues his exploration of the field into its minute details. Of the results of his labours thus to extend his acquaintance with the facts of experience we still possess a large specimen in his masterly survey of the members of the animal kingdom (the *History of Animals*), and fragments of a similar survey of the political constitutions of the Greek world of his day. Certainly Aristotle spared no pains to enlarge his acquaintance with the facts of which he sought the theory, and neglected no source of information about them. But further, he was not content merely to describe in all its extent and variety the spectacle he beheld; he attempted to reduce it to order and good arrangement. In regard to the animal kingdom, he laid the foundations of a zoological classification which, according to Cuvier, left little to be done by the centuries that followed. He grouped animals in species, species in genera, genera in families or orders. In a word, he was one of the first and one of the greatest of systematists. What he thus accomplished has won the wondering praise of successive generations of zoologists. To quote but one only, Charles Darwin says that his "two gods," Linnaeus and Cuvier, were "mere schoolboys to old Aristotle." He shows and employs the same gifts in other fields, and it might appear that his peculiar genius lay in the combination in unprecedented and not easily paralleled measure of the two powers of extensive and minute observation and of the reduction to order of the data so collected. He stands before the eyes of his successors as a prototype of the savant, a pioneer in the work which in modern times men of science so fruitfully pursue.

I do not question his title to their wonder and praise, but if

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these are taken to imply that his methods or his ends were the same as theirs the implication can only be admitted subject to the gravest qualifications. Between his and their science there is a deep and wide gulf. It is significant that his careful collection of the facts of the animal kingdom comes not at the beginning but at the end of his biological works: the collection is not made in order to procure the first principles of his biology, nor, when he has made it, are its data used to confirm or "verify" them. Francis Bacon with great sagacity detected a fundamental difference between all ancient and all modern science. In a sense, the courses of both begin at the same point, *i.e.*, with the particular data of the senses, but the ancient man of science proceeded from them at once to the highest and widest generalizations, and then from them deduced by a pure exercise of reason ever lower and narrower truths which in no way stood in need of check or confirmation by the data of sense; the modern man of science starts from a far more extensive collection of data, ascertained not only by careful observation but also by planned experimentation, proceeds from them by gradual induction to more and more wide generalizations, returning at every step to these data in order to control and confirm or correct the results of his procedure. Thus to the ancient philosopher one wide look over the field which he proposed to study was enough to supply him once for all with the main principles of the interpretation of all the facts lying within it, and the rest of his scientific work consisted in elaborating into an articulated system the consequences that necessarily followed from them: if the main principles had been properly got and the conclusions from them duly deduced, the latter were certain knowledge or science, and neither permitted correction nor required confirmation from fresh data of sense-observation. Between ancient and modern science there is thus, as Bacon says, an immense or immeasurable difference, and the difference comes out in the difference of their attitude to the data of sense, ancient science treating them slightly and cursorily, modern science consulting and deferring to them at every step in its advance. Their methods of procedure are in the main the reverse or inverse of one another, "deductive" and "inductive" respectively: the one proceeds by leaps and bounds, the other crawls step by step. Hence their respective results are wellnigh incomparable, and, where they coincide, do so almost by accident. If this be so, it might seem that to bring back to memory and view the results of ancient "scientific" activity is merely to satisfy an antiquarian curiosity. Perhaps to say so would be going too far, for, undoubtedly superior as those of modern science are, it may be said that there are results of value which its preferred method could not have secured, and many of those which were secured by the other or ancient method still are

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retained in the apparatus of the better modern scientific mind. Its mathematics, *e.g.*, till quite recently stood unaltered, and even from its physics we may still learn. With that, with Aristotle's version of it, I will begin my account of his philosophy.

Many of his extant treatises are devoted to the exposition of his doctrine of Physics—his science or philosophy of Nature. He includes within the scope of that science the whole sum of what is "natural," all that, as we should now say, falls within the field of any of "the natural sciences," not only of our "physics," but of chemistry, botany, zoology, etc. These "natural" things were all seated or contained within a single vast sphere, surrounding the earth as centre, which he called "the Heavens," but which (with its contents) I shall call "the [physical] Cosmos." This Cosmos had always existed and would always exist: it had not been created or generated and it was wholly indestructible. Within it he distinguished two regions which he—with momentous consequences—regarded as being, though both "natural," almost wholly different in character. The upper or outer region extended from the outermost circumference downwards to the lower or concave side of "the sphere of the Moon," so that we may call the lower or inner region "the sublunar region." Now in both of these regions of Nature or the natural there are bodies—in fact, they are filled with bodies. These bodies undergo changes, but, while the bodies in both, and therefore all bodies, change from place to place, that is the only change which bodies in the upper region undergo, while the bodies in the lower region, besides changing their place, also alter their qualities (including their shapes) and their sizes, and lastly change their very substance, so that new substances may be said to come into and pass away out of existence. Another contrast between the two regions is that in the upper the changes of the bodies are uniform, or obey uniform laws, while the changes of the bodies (or those of them which take place there only) are not strictly uniform, but only regular, *i.e.*, show occasional exceptions or deviations from uniformity. This contrast may be expressed also as one between necessity and contingency, and this has the consequence that, while our knowledge of the uniformities of the upper may be certain, that of the regularities of the lower cannot in many cases rise above being probable. Nevertheless, we must for a time ignore the differences between the two regions.

In the first section of his physical works (*viz.* his *Lectures on Physics*) he has in view the common or general facts of both regions, and therefore in the foreground are those simpler facts which are found apart from others in the upper region. What occupies the whole of the Cosmos are bodies extended in tri-

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dimensional space and enduring through time, having a nature or natures, possessing qualities (including shapes) and quantities, and exercising operations at least in the form of passing from one place to another (Locomotion or Motion proper). As bodies (1) they fill each its private place, and all together all the space or room there is, and (2) they are each and all endlessly divisible just as are the places (or the place) they occupy. Thus there is nowhere in the Cosmos any empty place (or Void), and, again, there are no Atoms or indivisible parts of any body. There are differences of *kind* among bodies, *i.e.*, differences more deep-seated and more permanent than differences of quality or quantity or operation: some are even eternal and indestructible. But for all differences between them, one thing is true of all of them: they all change, and in particular all at least change their places, *i.e.*, move. Or rather, more precisely, all are "moved," for not all (or perhaps any) originate or initiate movement, so that, in speaking of their "operations," we must understand the word not "actively" but rather "passively." Thus the Cosmos is the theatre, so to speak, of a vast and various and complicated passivity, mutability, or "mobility." The existence of anything and everything in it is such passivity or mobility, not as a mere possibility but as an actuality, an actual "being moved," such as is evident to us when we use our senses. To be thus actually moved is the universal character of all physical or natural beings whatsoever, and that presupposes in them an antecedent capacity to be moved. It is all-important for the understanding of Aristotle's Physics that we should firmly grasp this doctrine of all the movements which bodies visibly or observably execute, *viz.* that they are actual but not active movements, that they are actualizations of what our forefathers called "passive powers." I do not pause here to ask how Aristotle reconciles his doctrine that all bodies actually move (= are moved) from place to place in Space when in Space there are no empty places: he does openly face the problem, and propounds a confident solution of it (the same solution as, *e.g.*, that of Descartes).

The primary sort of Movement (found everywhere and always in the Cosmos) is Change of Place or, briefly, Displacement. No kind of body ever stays permanently in the same place; it is always in movement from one place to another, and always its passage takes or occupies some time.

Aristotle fully recognizes that the motion of Movement (most clearly, but not only, in the case of Displacement) involves or presupposes the notions of Space (or rather Place) and Time; and he expends the utmost pains in endeavours to clear up both of these notions and to recombine them, so improved, into a better, more "scientific" conception of Movement. Attempts to define such

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elementary and fundamental notions of Physics are not now so often made by modern physicists, but it is surely clear that it is necessary to seek for them, and to be dissatisfied when they are not found and made explicit. Even in such modern treatises as, say, Clerk-Maxwell's *Matter and Motion* I find articles entitled "XX. Definition of Displacement," "XV. On the Idea of Space," "XVII. On the Idea of Time." In both Aristotle and Clerk-Maxwell the aim (and the result) is to construct and supply what may be called a systematic science of Kinematics. But between the two Kinematics there are obvious differences, as, *e.g.*, that the modern one considers Movement "in its purely geometrical aspect" and the ancient one is not specially "geometrical." But the difference lies deeper than that: surprisingly enough, the former is "concrete," while the latter is "abstract." Aristotle believes—and all ancient Physics with him—that in better defining such notions he is at the same time coming to a better knowledge of the real facts of the physical Cosmos, and *imprimis* of the facts hidden from our senses in the upper region. The science he is developing is to him indubitably a real or realistic one, a system of ascertained and assured *truths*: its results are certain or proved pieces of knowledge of the real structure and happenings of and in the real Cosmos. By this way—and, according to him, by this way alone—we learn beyond doubt what these veritably *are*, and he gives us his account of them with a categorical dogmatism which we can now only characterize as uncritical or naïve. Unfortunately for him (and for ancient science as a whole), his results are hopelessly mistaken or, where not so, right only by a sort of accident. Towards the end of his life he had reached the conclusion that the supralunar region consisted of a "nest" or series of concentric shells (fifty-five in number), each with a proper, uniform revolution of its own, and many of them carrying round with it an infixed "heavenly body or bodies" (sun, moon, planet, stars). Of the working of this complicated *Mécanique Céleste* he is prepared to supply a kinetics or mechanics or dynamics, and in the light of these to "explain" all its appearances to our senses. To him, I repeat, this is no mere "hypothesis," it is well ascertained, and so certain, fact. But no modern astronomer would or could accept it as such, and it may safely be dismissed from our science. It can no longer be taken as *true*; it is dead, and nothing can bring it to life again.

Let us turn our backs upon it, and ask whether a more favourable verdict can be passed upon his complementary account of the lower or "sublunar" region, *viz.* that bounded above by the concave side of the lunar sphere and below by the centre of our Earth. This region also is filled—packed full—by bodies of many sorts, with

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many qualities, of many shapes and sizes, and operating in many ways. These, too, move (are moved) from place to place within it, but here their movements are rectilinear, not circular, or rather a mixture of both. Nor are they uniform, but the opposite, or, again, rather a mixture of both, which we may call by distinction "regular," *i.e.*, they admit occasional departures from uniformity, and so there are occurrences here due to Chance or Luck. The characteristic "forms" of the local movements here are along radial paths from the centre to the circumference or *vice versa*, and they are executed in times that are not the same for different distances. Still, the most important of them are regular: the bodies concerned in them *normally* move perpetually to and fro along these rectilinear paths from centre to circumference and *vice versa*. Such are their "proper" movements, which, however, are liable to interfere with one another and also to be overborne and permanently diverted by influences coming from the upper region. Their *actual* movements are, therefore, often very complex, but they can always be resolved into their components, *viz.* their proper or natural movements, their superposed or induced movements, and their impressed or enforced movements.

The first component is due to their particular "natures," and varies with the sort of body that moves or is moved. It is, therefore, important to discover and state what *sorts* of "natures" bodies in these regions have. But before we attempt to give Aristotle's doctrine about the *sorts* of bodies, we must recall his doctrine about the sorts of movement there are in this lower region, which there are not to be found in the higher. In the higher there were no changes except changes from place to place; in the lower there are, in addition to these, (1) changes from one quality to another; (2) changes from one size to another—the same body perpetually (though with differences of rate) changes its qualities and also perpetually changes its magnitude. But further, it also undergoes a more radical kind of change, (3) a body of one *sort* or "nature" becomes a body of another *sort*, and this may be called the passing out of existence (the *corruption*) of the first, and the coming into existence (the *generation*) of the other. The conception of this change is very important in Aristotle's physical theory. It is not that the first body is annihilated and the second created; it is a process of transformation, in which a body of one form or nature becomes a body of another. In the change *something* physical persists unchanged, and is in both the same (though what that *something* is cannot be expressed in words); it is what we call in each its [ultimate] "matter." In the other two changes both the matter and its form remain unchanged: no mere change of quality or of quantity alters the *sort* or nature of the body that so changes. For all that, no body of a

natural kind A can become a body of a kind B, unless it first has changed its qualities or its size or both, nor *that* unless it has still earlier changed its place.

Let us now return to the question, What sorts or kinds of bodies are there in this lower region? To this Aristotle gives with confidence an elaborate and exhaustive answer.

He begins with "the simplest" (he says "*the* simple") bodies, and of these he says that there are four—four and four only. These he also calls "Elements," and he names them Fire, Air, Water, and Earth. Out of them are composed all the other complex bodies that there are. We must not be misled by their names; they are not "ordinary" Fire, Air, etc. Each of the names is a label signifying a body of a determinate kind, which kind (or nature) Aristotle precisely defines as the combination of two fundamental physical qualities or properties (not of two kinds of still simpler *bodies*, each with *one* of these qualities). Any body of one of these *kinds* may be of any size; there is no smallest body, no indivisible atom. Each element has a natural or proper movement: it moves of its own nature or accord up or down along a path from the centre to the circumference and *vice versa*, and each has a place on that line where it is at rest. As there are four elements, there are four movements and four terminals or resting places, *towards* which its natural movement is. Fire moves up to and into a sphere next to that of the moon. Earth down to one surrounding the centre of our globe. Water and Air to spheres intermediate between these (Water to that just above the surface of the Earth, Air to that next above, below that of Fire). Each of the four, unless it is prevented, moves to its natural place. But, stable as are their several natures, they are subject to changes other than those of place, and, in particular, they are subject to, and are perpetually undergoing, the most radical of changes—that of kind. One kind of element can and does change into another kind, and in doing so it changes its quality and its volume; that is to say, a body of one elementary kind can become a body of another (indeed, of *any* other of the four). Aristotle holds and teaches that such transformation or transmutation of one element into another, of each element into any one of the others, is a regular, normal, perpetual occurrence everywhere and always in this lower region. This fact unites together all the events in Nature, for each such change in a body carries with it a similar change in another body or bodies: none does, or could, occur in isolation or apart from others. Each determines, and is determined, by another of the same sort, and the whole sublunar region is in these changes a system of reciprocally related events. In this doctrine, strange as may be its guise, we can recognize an explicit recognition of one still vital to physical science, viz. that all actual

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or possible changes in Nature are bound together in reciprocal relation to one another. It is as if Aristotle, blundering about among the thickets of error, had stumbled to a point of view from which there comes into his sight a conception of Nature which still guides and controls the modern scientific mind, viz. that it is a *system*.

At the next step in his account we shall find another similar anticipation of a view of modern science. He recognizes the existence in Nature of certain kinds of bodies, whose constitution is complex or composite. Instances of these are stones, metals and, in general, minerals; but more interesting and important instances are the kinds of bodies of which the physical organisms of living beings are composed ("organic bodies"), e.g., bone, bark, blood, etc. Of both sets he holds that in their composition there are present all four elements in various proportions or "doses." In the compound, however, these elements give up their several distinctive properties, and are so blended that there emerges a new nature of a higher order, with new modes of movement, etc. The nature of such a complex or compound depends upon the particular numerical proportion of the four elements in its composition. As each of the four elements can in the process of Nature be transformed into any of the others it follows that a compound body of the type A may be gradually transformed into one of the type B. This is, according to him, what happens in the physiological processes of Nutrition, Growth and Decay, and even in Reproduction. All this sounds like an anticipation of some of the doctrines of modern Chemistry (especially Organic Chemistry) and Physiology. To these first composite bodies he gives a name (*Homoeomerē* or "self-similars") which signifies that in any specimen of any one each of its "parts" is similar to each other and to the whole, so that no mechanical partition of it can without destroying it divide it into its "elements."

Next, he recognizes that several such bodies may be compacted by Nature into a new and still higher order of structure, which we should call an "organ" of a plant or animal, e.g., a leaf or a hand. Here the mode of conjunction is a mere congregation or conglutination of the parts, which in it preserve their distinction of kind from one another.

Last of all, such "organs" are combined with one another, and with portions of the (simpler) *Homocomerē* (possibly also with portions of nearly pure elementary bodies), into these "organisms," which are the bodies of plants and animals. These elaborate structures are the final or consummate results of the constructive powers of Nature.

These constructive processes (which have also converse destructive processes) are not creative but formative. In them Nature is always working on a given material, and is imposing form upon it, further

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and higher form. In them also Nature is, to use our modern words, expending energy and effecting real and substantial alterations. It is, further, realizing ends (that is, raising its results to a higher order or level of being), but it is doing so blindly or without foresight. Nevertheless, in the result—which is Nature as we now find it—there is a teleological character: Nature (*natura naturata*) is what Mr. Bosanquet calls “a *de facto* teleological system.”

Here we can scarcely avoid being reminded of such very modern notions as that of Evolution. Might we say that Aristotle especially in respect of vegetable and animal organisms views them as products of Evolution? I think we must say, “No.” He does not do so even in the form in which Kant spoke of it as an hypothesis. Kant thought it possible to suppose that in a time *now past* Nature may thus (*i.e.*, “evolutionally”) have given birth to the forms of organic life now found by us in existence, but not to suppose that process to be now going on. Aristotle regards forms or types as eternal, not generable, and therefore never having been generated; while, on the other hand, the processes of Nature of which he speaks are now, and indeed always, going on, always producing results which are no sooner reached than (equally naturally) they at once begin to decline and decay towards corruption. There is nothing to be gained in the understanding of Aristotle’s conception of the processes of Nature in the organic or inorganic worlds by using evolutionary language in the exposition of them, or treating him as an Evolutionist born out of due time.

The discerning reader will have noticed the absence from my account of Aristotle’s *Physics* of a more surprising absentee. Does he say nothing of Causation, and where, if anywhere, does he bring in the notion of Cause? Of course, he constantly, in speaking of the processes of Nature, uses a word or words which we translate “Cause,” and in reproducing his account of them I have with difficulty avoided it. But—once more—his notion of “Cause” is very different from that of modern science. No doubt, to him, these processes are all, if not uniform, at least “regular”: they follow “rules.” The web of all the operations of Nature can be disentangled into courses or threads or chains or series of connected events, in which each successor requires for its occurrence the occurrence of a determinate predecessor; but the earlier occurrence, though a necessary condition of the later, does not determine it, does not “produce” it, and so is not what *we* should call the “cause” of it. It is not even what we after him call the “efficient” or effective “cause” of it (*his* “efficient causality” is not a relation between two *events*). In the connection between events in Nature the former

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event is never more than an indispensable condition of the latter: it *does* nothing—no, not even when the second always or uniformly follows the first. Constancy of conjunction between two kinds of events does not mean that an instance of the one “produces” an instance of the other, or has in itself the *power* to do so. The only things which, according to Aristotle, have such powers are not events or even acts, but *agents*, *i.e.*, substances, or what some now would call “continuants” in Nature. Here I must once more remind the reader that, according to Aristotle, all events in Nature are actualizations or manifestations of *passive* powers, changes in substances which are not actions but affections of them, all conditioned but not *caused* by similar affections in other substances, and that without beginning or end. Hence the “agents” in Nature are really “patients,” and, though the Physicist may among their operations distinguish between “active” and “passive,” the distinction is really a relative one between what are in reality both “passive.” To anticipate an Aristotelian doctrine which lies, if not outside his Physics altogether, at least on its extreme frontiers where it merges into Metaphysics, nothing is properly “active” which is not beyond or above “Nature.”

As with this acknowledgment of the fact that to give a complete or satisfactory account of Nature we must posit or suppose in the Universe a complement of it in a region of what, if not to be called the “supernatural,” is at least the “supranatural,” we should expect his account of Physics (as the science of all that is “natural”) here to close, and to be followed at once by an account of this supranatural region and its contents. What we do find offered to us in his works is, however, by no means quite so simple as that. No doubt we do find that his Physics towards its end runs out, or rises up, into such a literal “metaphysics” or “supra-Physics.” Within his *physical* works, at many places in their course, and especially as we near their close, there is opened before us the prospect of an account to be given of that complementary region of the Universe and its contents, and indeed there is there supplied a sort of first sketch of that account itself. He does not call this “Metaphysics,” or give it any name. In what he there says he confines himself to developing the notion of a First or Primal Mover, outside or above Nature, the eternal unmoved or immovable Source of all movements within Nature. It is as if he regarded as the one thing still left to be accounted for in his whole philosophy the existence in and all over Nature of the total fact of perpetual Movement or Change; above all, of the endless revolutions or rotations of the heavenly bodies in the supralunar region of Nature; as it had nothing in mind but to crown his Astronomy (and therewith

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his Cosmology) with an account of what the primary sources (or sources) of all such movements or changes must in essence be.

Such, in little more than its skeleton, is Aristotle's account of the order or system of Nature, of the framework and chief contents of the physical Universe which is our total environment, the scene of our lives, the theatre of our activities, as it extends from the centre of the Earth to the utmost circumference of the Heavens. It is the result of the first attempt by man to think out an account of Nature as a whole, and in its main lines of structure, and in the thinking out no pains were spared by its author. Doubtless, our verdict upon the result of such titanic efforts must be that it is in the main mistaken—not the knowledge of reality which its author claimed that it was. Yet, strangely enough, it was an error without the making of which the science of Nature could not have made progress or reached as far as it now has. Perhaps Francis Bacon was profoundly right when, reviewing the history of Science, he said: "*Citius emergit scientia ex errore quam ex confusione.*" But this is not the place to enlarge upon the way in which the commission of errors furthers the advance of Truth. At any rate, we can scarcely view with less than a kind of respectful awe this first daring venture of human reason to discover in what environment Man lives his life and does his work.

(To be continued)

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G. R. G. MURE

II

§ 21. Until a few years ago the hope of the physicist seems on the whole to have been that he would eventually be able to exhibit a single interconnected system of perfectly deterministic causal laws. He took the relation of cause and effect in all change to be such that from a determinate antecedent state of that which changes there must necessarily follow a different subsequent state of it, and it was assumed by him that complete knowledge of the antecedent state must enable exact prediction of the subsequent state. I do not think it matters here whether that which changes was taken as a limited subject of change or as the whole physical world. Doubtless the assumption was that the whole present state of the world is the necessary consequent of its whole past state, but this did not seem to affect the character of the necessary nexus detectable within the limited subject of change which happened to be occupying the physicist's attention at the moment. Doubtless, for example, the whole stellar universe was taken to be operating in any case of gravitational attraction, but all cases on any scale seemed amenable to the law that gravitation operates in inverse proportion to the square of the distance between the two bodies concerned, provided due allowance be made for the pull of other bodies operating according to the same law. For though the physicist still believed that in principle all phenomena, macroscopic or microscopic, could be reproduced by a working model, yet his laws were quantitative laws; he assumed after Descartes that physics has to present qualitative change mathematically in quantitative terms. In short, his laws were identical in their instances and not also diversified in them.

§ 22. Thus on the whole the physicist interpreted the relation of cause and effect as a necessary nexus of the temporally prior with the temporally posterior, the prior inexorably conditioning the posterior without the operation *a fronte* of any final cause. This is, I think, no more than what remains of Aristotle's efficient cause when you have excluded formal and final cause from a world where value is treated as irrelevant; it is just that necessary sequence in time which Kant took to be the essential character of causation.

With this view the physicist was usually content. Yet occasionally some hesitation betrayed itself, and, half conscious of certain

difficulties involved in explaining cause and effect as no more than necessary sequence in a world controlled by rigidly deterministic laws, he would claim that he only described and did not explain.

§ 23. Now Kant pointed out that causation so interpreted inevitably begets an indefinite regress of cause behind cause. The sequence implies a primary cause, the presence of which as a first term of the sequence would nevertheless violate the definition of any term in the sequence as being both cause and effect. He saw that any term in the series is in the end only contingently determined, and that the series is not a self-subsistent whole, but he held the category of cause and effect to be a form intrinsic to the physicist's thinking. There is, however, a further difficulty. If the cause is really the necessary and fully sufficient condition of the effect, what is there in the principle of causation to determine the order of the terms? Their relation becomes absolutely reciprocal. Doubtless when we find the White Queen first crying and then cheerfully pricking her finger, we are shocked by the absence of something which we count on in our experience; but of this something the principle of causation so interpreted offers no account. An absolutely deterministic series has no reason to show why it should not be reversed. The laws of motion and gravitation which on the classical view govern the earth's orbit, admit of its actual motion; but they admit just as well of the exactly opposite motion. This becomes quite obvious when they are mathematically symbolized and past is called $-t$, future $+t$. In short, something is missing.

§ 24. It was, I think, Henri Bergson who first made quite clear what this missing something is. He pointed out that in the world of classical physics there is no genuine change, because there is no genuine time. Genuine time is the measure of a change which has irreversible direction. Classical physics was indifferent to direction. Time in the universe which it strove to envisage was a dead fossil-print, a mere fourth dimension extending a spatial frame of reference. Kant did not see this: if he had, he must have radically altered his account of the empirical ego.

§ 25. The apparent success of prediction based upon classical primary laws tended to conceal this absence of genuine change. The appearance of a comet at a place and date foreseen seemed to show that a system of these rigidly determining laws really underlay and explained the observed changes of phenomena. But in fact the present prediction of a comet's future visibility is no more a *foresceing* than is the present calculation of an unrecorded appearance of it in the past. Once the mathematical formula of its path is worked out, the appearance of the comet is *already apprehended*; for it is nothing but one of the positions of which the

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formula gives the totality. When the comet actually swings into view there is no change of which the classical physicist has any account to give. His law, as we saw, is identical, and not also diverse, in its instances; it is not a theme developing itself in and through its various phases. It is as ineffective in explaining its instances as the Milesian substance. And the statement of it turns out to be a mere tautology. As Professor Eddington points out,¹ the First Law of Motion, "Every body continues in its state of rest or uniform motion in a straight line, except in so far as it may be compelled to change that state by impressed forces," really does no more than assert that every body continues in its state of rest or uniform motion, except in so far as it does not. The instances of the law, the supposed phases of change, do not differ from one another, or from the bare identity of the law itself. They are mere repetitions which mathematics can enumerate and measure, but qualitative difference and real change they do not exhibit. Or the tautology may be expressed in this way. Each instance of the law is an event wherein a cause fully determines an effect. But this absolute mutual relevance and interlocking destroys any difference between cause and effect. Not merely is their order reversible: the terms coalesce; nothing happens; there is no event.

§ 26. Thus it seems that bare efficient causation breaks down as a theory. The world becomes again the Parmenidean One without change and without internal diversity. At best, if we allow the events, the instances of the law, to retain numerical difference, physics relapses into mathematics, where admittedly change has no place. I am not competent to ask whether the recent suggestion by certain mathematical logicians that mathematical truths are tautologous is a further stage of this descent to nothingness.

§ 27. But the physicists have lately been overhauling their assumptions. I am not clear that the four-dimensional continuum of the relativists admits real time any more than do the formulæ of classical physics. There has, however, been a definite reaction from the classical ideal of rigidly deterministic law. The primary laws of physics, we are now told, can apply only to the behaviour of a singular individual, and I think that has already become obvious from our criticism of them. On the other hand, the problems which begot the quantum theory have apparently shown that the behaviour of every electron and proton cannot, as was once supposed, in principle be worked out exactly according to such laws. The quantum theory relates to the transformation of energy, and though according to a primary law energy is always conserved, yet according to a secondary law, the Second Law of Thermodynamics, the successive forms which energy takes constitute an irreversible

¹ *Nature of the Physical World*, pp. 123-4.

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descending scale. Each step means a loss of organization and the increase of a random factor in the behaviour of the atom's components. On the whole, it seems that the term "random" is not here intended to express a mere cloak for ignorance on the part of the physicist: we are to assume an actual element of indeterminacy *in re*. For the fixing of an electron's velocity and the fixing of its position are processes which necessarily (if that is the proper word) interfere with one another; *i.e.*, if you fix either precisely, the other can be fixed only within a not further determinable range of variation.

§ 28. The inferences which seem to be drawn by the modern physicist are two: (1) that an electron in motion is not something of which a model could in principle be constructed, for it can on occasion occupy the whole of its orbit round its proton simultaneously; (2) because the *range* of variation (either of velocity or of position) can be precisely limited, therefore the laws of the transformation of energy are laws of real probability, probability, *i.e.*, which is *in re*, and the degrees of which are in no sense at all a measure of the physicist's ignorance. We may draw a third conclusion: (3) with secondary laws, such as the Second Law of Thermodynamics, genuine time and change with irreversible direction are once again admitted to the world of physics.

§ 29. If I might hazard a guess at what has happened, it would be this. The rigidly deterministic primary laws lead to an *impasse*, because they deny genuine change. Now if you insist upon expressing genuine change everywhere and flatly deny primary laws, you will find yourself expressing change as sheer contingency, mere substitution of a new state of things which has no connexion with what it supersedes. It will seem to you at first that if rigid necessitation can make no advance, can express no real change, then a change is an event which one can call at will miraculous or sheerly fortuitous. (Dr. Broad's odd doctrine in *Scientific Thought*, Chapter II, of change as constantly adding to the sum-total of events, seems to come very near this.)

But it is more likely that you will compromise. You will come to see that absolute contingency is by itself no more satisfactory than rigid *a tergo* causation, and you will go on and try to combine them. That, I suspect, is what modern physics is trying to do. Some primary laws are still accepted, though the conviction is growing that they are all really laws of probability. These laws of probability in spheres where real change seems undeniable are formulated as a combination of necessity and contingency rather hard to express. You may say that the limits of a group of particles, some one of which is bound to behave in a certain way, are antecedently determined, but no particular one of those particles is antecedently

destined so to behave. Or you may say that the behaviour of any given particle is antecedently determined within a certain definite range of alternatives, but nothing determines which alternative it shall select. That the law of this behaviour is often called statistical because it is reached *ex post facto* by averaging results may prove a useful indication how the physicist's thought is running. But if he maintains that this limited indeterminacy really resides in the particle and the group of particles, it is not the immediately important point. So far the position seems quite self-contradictory.

§ 30. As it stands I can see no solution. We must, I think, cast back and look again at the premisses of this paradoxical conclusion.

I think we can find the tacit assumption which makes the difficulty. It occurs to me to put this question: If it is not possible in principle to construct a model of the modern electron in motion, because it would have to be displayed as in several places at once, can one any longer assume that what one is dealing with is a mere plurality of singular particles? The modern physicist admits that primary laws only work when confined in their application to the behaviour of a singular individual. Yet the secondary laws of probability, to which he has recourse when this barrier is lifted, he formulates as laws of the behaviour of a plurality—as the term “statistical” easily betrays. But a plurality is nothing but an *aggregate* of singulars, and its behaviour can be nothing whatever beyond the sum of the behaviours of the singulars. Now the singular individual dealt with by the primary laws did not, as we saw, really change in behaving by the rule which the primary law dictated. But the secondary laws were formulated to express the transformation of energy, which *is* real change in real time. Hence, whatever it is which changes when energy is transformed, it is not a mere plurality of singulars. It is something which persists self-same, but self-same *through* diversity; something into which one nature enters whole and yet incomplete in each phase; something which is not a plurality of atomic singulars, but a unitary system of diverse phases.

§ 31. Thus the secondary laws were not formulated to work *in pari materia* with the primary, but they have nevertheless been given the same fundamental logical structure as the primary. And the adjustments which have had to be made in formulating them are obviously not organic to this foundation. We have either to say that these laws cannot be strictly accurate—a view, I understand, rejected by the vanguard of modern physics—or that they measure a real indeterminacy. What seems instead to be wanted is some conception of concrete unity *in* diversity, which may prove hard to formulate, but at least does not take the crude form of a plurality of singular units. We cannot make progress with a mere juxtaposition, without any overlap, of sameness here and difference there—as we discovered

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some time ago. Of course you can always make a show of analysing a system of unity in diversity as a plurality of units, but if you do you fail to touch the special nature of the system. And if instead you honestly try to account for the concrete diversity which any genuine change presents, you are bound to reach contradictions such as the statement that a quantum of light is large enough to cover the face of an 100-inch mirror, and yet small enough to enter an atom and endow a released electron with the whole amount of its own action. These contradictory characters of a quantum emerge, I understand, always the one before and the other after a transformation of energy. Surely; for an atomic singular cannot really change.

§ 32. The classical physicist would perhaps have answered that unless he may assume that he deals with a plurality of units, he cannot measure, and that the possibility of mathematical measurement limits the sphere of physical inquiry. Yet that would surely be a confession that in the face of the whole problem of energy physics is perfectly helpless.¹ Mathematics can never measure real change.

§ 33. In short, the true scope of physics is very hard to determine. It looks as if there were elements in physics which any definition strictly severing physics from every other science would be bound to exclude. Physics seems to borrow qualitative diversity from above and quantitative method from below, and to find it not easy to amalgamate them. Perhaps Hegel was right when he said, "The only pure physicists are the animals." But, after all, the precise scope of any inquiry is the last as well as the first question for the inquirer, and the physicist's domestic difficulties are not our immediate business. What concerns us is to ask how far our hypothesis that all real change is a development or a decay, exhibiting a partial fusion or overlap of permanence and flux, survives our rash excursion into the realm of physics.

§ 34. Now by reinterpreting the doctrine of indeterminacy, by substituting a system of phases for a plurality of units, we came back to our own hypothesis. And yet I do not think that our concept of change emerges quite scatheless from the test. We urged that to leave necessity and indeterminacy merely juxtaposed without overlap gives rise to hopeless confusion, and certainly if there is any overlap or fusion at all, we can claim that no *mere* necessitation and no *mere* indeterminacy remains in our concept of change. But the difficulty I feel is that unless there is *complete* fusion—which *ex hypothesi* there is not—there does remain in our concept a defectiveness which cannot be expressed without falling back for the purpose on mere juxtaposition. If the potential must become actual,

¹ Assuming, of course, that the Second Law of Thermodynamics is true, and that physics cannot exclude genuine change from its world.

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it would seem that there is no real change: a rigidly deterministic law governs the process. If there is real change, how can we avoid saying that the potential might not have been actualized precisely as it was in fact actualized? Aristotle, from whom we originally borrowed our hypothesis, felt this difficulty when he said that a stone thrown into the air has a potentiality which can and must be actualized in one way only, *i.e.*, by falling; whereas the development of human character proceeds alternatively either in a good or a bad direction, because it starts from an essentially two-way potentiality. He called the one-way potentiality irrational, the two-way potentiality rational, but he did not fully solve the problem; he could not entirely exclude contingency from his notion of free will.

§ 35. Nor, again, does it seem to me that Bergson, despite his brilliant exposure of the pseudo-time of classical physics, provides us with any real way out of this *impasse*. I confess, however, that I am not quite sure what to make of his *durée concrète*, his self-directing *élan vital* which contains the whole past in itself, and is yet a perpetual creation of novelty. Sometimes it seems dangerously to resemble Heracliteanism, and to be a mere denial of permanence in the interests of a flux which is merely being mangled and misinterpreted for practical purposes when the intellect introduces any element of fixity into it; sometimes, on the other hand, it looks more like an effort to formulate that notion of an absolutely concrete change which we have already seen break down under criticism.¹ I have something of the same difficulty with the *divenire* of the Italian idealists. Croce's conception of "becoming" (still more Gentile's) often appears to be a mere flux without permanence, and yet one finds both Bergson and Croce using terms such as "the Absolute" and "the Whole," which seem to indicate an effort to avoid this conclusion. It is interesting to remember that we found the same ambiguity in the Fire of Heraclitus, which became the very symbol of flux, but was to begin with an eternal substance formulated in accordance with the Milesian tradition.²

§ 36. Thus our difficulties are not lessened. At best we have discovered that physics cannot escape them if it tries honestly to deal with real change. This may excuse us from pursuing the problem through the more concrete natural sciences, since if physics must accept the difficult notion of a transition between a potential and an actual which are essentially correlated, or else give up the right to talk of change, then *a fortiori* this is true of those other sciences. If I had the knowledge or the time, it would be interesting to pursue the subject in the realm of economics. But I have not, and our own philosophic problem still remains.

§ 37. I had better begin by re-stating it as it now appears.

¹ See Part I, §§ 10 and 11.

² *Ibid.*, § 4.

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Wherever there is change, a single subject enters whole into every phase of the change, and yet in every phase suffers a loss or gain in completeness. The phases are complementary, each contributing essentially to the whole which assumes them in turn; and yet they are alternatives, each of which the whole assumes *instead of* another. This contradiction—the defect of our concept of change—appears also in the difficulty that if a new phase constitutes a real advance, it is hard to deny that the advance might have taken a different direction: we seem unable to exclude some tincture of indeterminacy. Yet we have this advantage over the modern physicist. We cannot express the defect, the lack of complete fusion, in our concept of change without recourse to the old juxtaposition; but our concept, we claim, still has its positive aspect as a union which is more than mere juxtaposition, hard as we find the task of formulating it, whether as a freedom which is more than contingency, or as a necessity which is more than rigid determinism. And on the strength of this positive aspect we are prepared to accept the whole in its complete essential nature as somehow determining *all* process between potential and actual. We take the system as operative in every movement from phase to phase, and not as being a mere plurality of atomic singulars. We do not accept the bare disjunction: either there is a rigid *a tergo* causation, or else something happens without a cause. We postulate a partial overlap; but can we express it more clearly and justify it further?

I can only suggest the line of solution to which I think we are driven.

§ 38. If the problem is confined to a limited subject of change, be it the transformation of energy in a degenerating physical universe or the evolution of natural species on this earth, the rise and decline of civilizations or the progress and corruption of individual character, then there is no solution. Moreover, there is in these examples of real change, and in any others which we might take, no means whatever of determining whether in the *whole* course of each specified type of change the process is in principle anabolic or catabolic, on the whole a progress or a decline; or again, whether, as Aristotle supposed, it is an unending cyclical alternation of the two. The principle of change, as we have formulated it, can no more tell us this than a primary law of physics can decide whether the stars shall move forwards or backwards in their courses. We postulate a climax as the classical physicist did not, and within a limited stretch of change we can decide between these alternatives; but nothing in our principle precludes the extension of our stretch, and if it be extended nothing can intervene to save us from the same indefinite regress which Kant detected in physical causation.

§ 39. On the other hand the various spheres in which we encounter

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real change do seem to exhibit different degrees of overlap, and by comparing them we may perhaps hope to detect and express the positive side of our concept. The identity which binds an initial fully organized physical universe with a world in which energy has reached the dead calm of total equilibrium, and the identity which binds together the protoplasm and the evolved animal species, are tenuous threads. But the unity which develops itself in and through the actions of a strong and consistent human character, or in and through the achievements of a great artist, does not link so loosely the phases of its differentiation. His actions flow freely from the agent, his works from the artist's genius; but this freedom is not a rigid determining, for each practical and each aesthetic act is a creation. Nor is this creation the caprice of indeterminacy; for the seal of one personality is set upon each action and each work of art. The phases of practical action and of artistic creation imply a climax, a single practical and a single aesthetic end, which is not fulfilled in any single phase; yet this very allegiance to a whole beyond itself, which each several phase confesses, gains expression precisely in that uniquely individual perfection which we seem to enjoy in any great work of art; precisely in the absolute value which we are moved to attribute to a single heroic act, even when it appears to fail disastrously in realizing that unitary plan of life by which alone it was dictated. Here at least the positive fusion we seek seems indisputably manifest.

§ 40. Yet we must not be too sanguine. We have found degrees of comparison, but we have not found a superlative. It remains true that in no one sphere of experience, in no limited subject of change, is this freedom, transcending alike necessity and indeterminacy, consummated. Perhaps the artist and the man of practical genius—even the thinker—may seem to us in some sense at once to foreknow and to create their destiny. Certainly the least reflection on moral conduct reveals the paradox of an agent assuming that the goodness which can and must be achieved only by his action is nevertheless a character of the real, is rooted in the nature of the universe. Indeed, once we recognize a standard of value in change we cannot escape the notion of an overlap of flux and permanence, and when we acclaim absolute value we cannot help but think that we enjoy eternity in an instant. And yet we partly deceive ourselves. The deeds of practical genius, the creations of the artist, have still their negative aspect of defect as the products of trial and error; in some measure each still is substituted for the one which went before. The action is a means only; the end is not fully immanent in it. The poem or the symphony belongs to an early manner which the artist would have discarded before he did if his insight had been truer. When we reflect in this vein, the old spectre

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of a mere successiveness, the Time of the classical physics which does not move, or moves without true direction, the lifeless fourth dimension which turns change indifferently into a rigid determining or a sheer contingency, re-emerges in the heart even of those experiences which we account the best we have.

§ 41. All this remains true. Nevertheless, in one sphere of change the whole which changes is immanent as in another it is not. The fusion of permanence and flux is not everywhere the same in kind and degree.

This fact must have a significance. Can we find it if we turn again from a limited subject of change to the universe as a whole?

I cannot here attempt a direct answer, but this I would suggest. In setting one experience above another because in it there is a nearer approach to complete fusion of flux and permanence, it seems obvious that we are judging change itself in the light—the very dim light perhaps—of what is more than change. And this light by which we criticize must come from somewhere. We try to formulate the notion of a subject which enters absolutely whole into diverse phases, and while we think of this subject as changing in time, we only succeed in uttering contradictions. Yet anything less than this notion fails to satisfy our thinking. Now, wherever the subject of change is limited, we are foiled by the incomplete fusion of permanence and flux, the incomplete immanence of the subject in each phase of its change. We might therefore infer that the contradictions which continue to break out in any limited sphere are due precisely and only to its limitation, its lack of context. We might think that we must reinterpret the potential and the actual as the apparent and the real, passing beyond a mere *de facto* hierarchy such as on the whole Aristotle's universe seems to be¹; and so we might conclude that only in reality as a single whole is this complete fusion, this entire immanence, made good.

§ 42. It is futile, I think, to argue this conclusion directly. The question is rather whether there can be found any other spring for philosophical speculation, critical or constructive, than the impulse to formulate some such notion as this. I have not succeeded in finding one, but the history of philosophy is itself a crucial example of process in which permanence and flux overlap but cannot wholly fuse. It is a criticism of change, and yet itself must change. It cannot wholly overpass and transcend the limitations of the individual thinker as such. It may be the immanence in him of a reality beyond himself which gives the thinker this impulse to transcend change, but *for him* that reality cannot be fully immanent. For him

¹ Despite his doctrine of pure *ἐνέπρεια*, in which he attempts, without complete success, the absolute fusion of permanence and flux.

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the reality of his own thinking must remain in part potential, and he can never quite definitely formulate the notion of a timeless climax of development which lies beyond development itself. The greatest thinking is no more immune than the noblest art or action from defective overlap of fixity and flux.

(Concluded.)

TIME, SPACE AND REALITY

CANON PETER GREEN

SOME time ago I had a shock. I was reading, in the *Mathematical Gazette* for March 1931, Sir A. S. Eddington's presidential address to the Mathematical Association in 1930. And quite suddenly I came on the statement that the number of protons in the universe is either 7 or 14 with 78 noughts after it. My breath was taken away. Readers of R. L. Stevenson's story, *Providence and the Guitar*, will remember the maiden lady who, after hearing what the Commissary said when he was woken up in the night, felt her maiden modesty so outraged that she doubted if she ranked any longer as a maiden lady. I felt just like that. I felt that my philosophic modesty had been so outraged that I doubted if I ranked any longer as a humble student of philosophy. Sir Arthur has certainly not counted them. Then how in the world does he know that they are what he says they are?

To the non-mathematical reader two lines of escape suggest themselves. After all, when you are dealing with a figure ending with 78 noughts the difference between one amount and twice that amount is pretty considerable. There is, so to speak, a margin of error. But that will not do. Sir Arthur does not offer us some figure between 7 with 78 noughts and 14 with 78 noughts. He offers us those figures as exact alternatives. It is either one or the other. An illustration may possibly help (or exasperate) the reader. If a flea were walking about on a leopard skin (for the purpose of this experiment the leopard must be assumed dead and skinned) he might count the spots but he could not be sure that he had got the number right till he knew whether the spots showed through to the inner side of the skin. If they did not, then the number he arrived at by the count, say four hundred, would be correct. If they did show through, then the real number would only be half as great, namely, two hundred; for he would have counted each spot twice. Similarly you can't be certain with curved space-time whether you have counted a proton once or twice. This illustration will probably exasperate mathematical and non-mathematical readers about equally. But it is the best I can manage, I fear.

Another line of escape which will suggest itself to some is the fact that different mathematicians offer us very different universes to choose from. You can have your universe according to Einstein or according to De Sitter, according to Sir Arthur Eddington or to Sir James Jeans. You can have an expanding universe, a contracting

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one, or a static one. And, finally, you can, I believe, still have one finite, or infinite, as you please. Perhaps then, it will be urged, Sir Arthur, in telling us how many protons there are in his universe, is merely exercising his undoubted right to make his own universe the size he prefers. But I fear that will not do. There may be several kinds of universes to select from. But, given the pattern you select, mathematics will tell you how many protons there must be in it. To take an illustration from third-form mathematics, we may say that you may make your flower-beds with any number of sides you like, but if your gardener is careful to have it of a regular shape then mathematics, relying on the profound fact that all the angles of a regular polygon together with four right angles are together equal to twice as many right angles as the figure has sides, will enable you to foretell (to the amazement of your good gardener) the exact size of each angle.

Given the type of universe Sir Arthur prefers, he can tell us how many protons there are in it without counting them.

But ought he to be able to do so? Is it not almost indecent that he should do so? It is, of course, no more than an extreme example of the problem that confronted Kant. How is synthetic knowledge *a priori* possible? But how extreme an example!

Then the other day I found the solution. Sir James Jeans says, in his book *The New Background of Science*, that Heisenberg's

equation $pq - qp = \frac{h}{2\pi i} \epsilon$ suggests that subatomic nature cannot

be represented in time and space at all. But that at first is a truly shocking idea. Reality cannot be like a cow looking into the window of a cowshed, half in and half out of the shed. Either reality is in time and space or it is not. It cannot be in time and space when it is viewed in the large and outside time and space when looked at in small enough detail. There seems to be only one solution of our difficulty, and that is to deny that reality is in time and space at all. We must boldly say that to be observed is to be in time and space and that to be in time and space is to be observed. To give my essay a nice mathematical appearance I will write that as an equation:

(To be observed) = (To be in Time and Space).

If some miraculous quickening of our eyesight or some wonderful improvement in our microscopes enabled us to see the atom, then subatomic nature would be "in time and space."

Let us try to see what this involves. Readers of Mr. H. G. Wells's short stories will remember the story *Through a Window*. The hero with both legs broken lies in bed and sees what he can see through the window. Anything outside the limits of vision permitted by the size of his window is unknowable to him. Let us suppose that

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the window faces south and that the river (obviously the Thames) runs from west to east. Sometimes, when the sun is rather too hot, the bed is put against the north wall. Sometimes, on fine mornings, it is put close to the window. Sometimes the head of the bed is put against the west wall, so as to allow the patient to see as far down the river as possible, and sometimes it is put against the east wall, so as to allow him to look as far up the river as possible. By the time the man has noted how far up and down the river he can see from each position, and how far up and down the acacia-tree, which stood just outside the window, he can measure when he is against the north wall, and how far up and down it when close to the window, he will only need to know the length and breadth of his bed (I do not think he will need any other data) and he will know all there is to know about the size of his bedroom and the area of his window. *Of the river and the acacia-tree he will know nothing.* The river—how long it is? how deep?—those are questions he cannot hope to answer. The acacia-tree—how far below his window ledge the roots lie and how far above the window's top its height extends are hidden from him for just as long as he remains in his sick room. For river and for tree alike to be observed is to be within the frame of the window, and to be within the frame of the window is to be observed.

Does science, then, tell us nothing except about ourselves? Is it all, at the last resort, a subtle form of anthropology? Man has long known that he supplies the old-fashioned "secondary qualities." We know, too, that we each supply our own time and space, carrying them about with us as the snail carries his shell. How much farther will the process go? Will some mathematician in the perhaps not very distant future give us a wave-equation requiring n dimensions from which he will deduce the size and markings of an as yet undiscovered bird of paradise in unexplored New Guinea? Why not? Size after all is only another name for space, and colour another name for wave frequency. To one who can count the protons in a universe the colour spots on a bird in New Guinea should be child's play.

Miss Codger in *Martin Chuzzlewit* says (God bless her!): "To be presented to a Pogram by a Hominy, indeed, a thrilling moment is it in its impressiveness on what we call our feelings. But why we call them so, or why impressed we are, or if at all we are, or if there really is, oh gasping one! a Pogram or a Hominy, or any active principle to which we give those titles, is a topic, Spirit searching, light abandoned, much too vast to enter on, at this unlooked-for crisis." I sympathize with Miss Codger. To be introduced by a mathematician to a universe (or a bird of paradise in New Guinea) which he has never seen, a thrilling moment is it in

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its impressiveness on what I call my feelings. But if indeed there is a mathematician, or a bird of paradise, or—but need I go on?

What I have written is not in any way derogatory to natural science. It tells us what it greatly concerns us to know. Only of reality it tells us, can tell us, nothing.

And “hence a paradox which comforts while it mocks.” Science which strives to be objective, and to eliminate the personal equation, in the end tells us nothing except about the framework which we ourselves impose on reality. Ethics and Aesthetics, the search for goodness and for beauty, which seem so subjective and so individual, may perhaps prove the only ways by which we can come into touch with reality. And they seem to promise to be very broad highways if we will only tread them.

DISCUSSION

PROFESSOR WHITEHEAD'S NATURE AND LIFE

THE EDITOR

THIS little book (published by the Cambridge University Press, price 3s. 6d. net) consists of two lectures delivered before the University of Chicago in October 1933. Those who are acquainted with the author's philosophy expounded in detail in his earlier works will not find anything new in Professor Whitehead's latest book. They will, however, enjoy reading in a concise form what amounts to an outline of his philosophy, and following his illuminating discussion of the principles upon which it is founded. Briefly, it may be said that the book is an attempt to show that Nature cannot be truly conceived as a static and lifeless thing, but must be interpreted as a creative process which has goals and values.

It will probably be most beneficial to those readers of this journal who are interested in Whitehead's Philosophy, if the writer tries to give a fairly complete summary of the argument running through the book with the minimum of comment, thus enabling this distinguished thinker to state his case in his own way.

"Empty" Space and Matter.—The first of the two lectures of which the book consists is entitled "Nature," and is mainly occupied with describing the growth and development of the scientific conceptions of Nature during the past three hundred years, and in elucidating the implications involved in them. Whitehead conceives the task of Philosophy to be the search for the solution of the problem of how Nature is ultimately to be understood, and the question asked at the outset by him is—what is the most comprehensive and concrete interpretation of Nature suggested when all the facts of modern science and experience are taken into account?

In the sixteenth century a certain view of Nature began to sway the minds of thinkers. Nature was conceived as bits of matter organized or unorganized moving about in an otherwise empty space. These bits of matter were regarded as passive substances supporting various qualities, for example, shape, colour, smell, motion. Some of these qualities, such as shape and motion, were called "primary"; others, such as colour, taste, and smell, "secondary." The events in Nature, on this theory, consist in the changes which these qualities undergo, more particularly as changes of motion. Indeed, motion, giving rise to changes in spatial relation, is the only mode of interconnexion between these bits of matter. On this view, then, Nature consists of an unchanging, empty space with bits of matter possessing qualities and capable of locomotion, although the theory admits that life and mentality must somehow be given an appropriate niche in the scheme.

Whitehead points out that Natural Science in its growth during the last three centuries has one by one discarded every feature of the notion of Nature just described. First it denied that secondary qualities were in Nature: they were merely the mental reactions of the percipient. Then it abandoned empty space. From inferences derived from investigation into the transmission of light, space, far from being empty, seems to be a veritable field of incessant activities, although these activities cannot be directly perceived. A subtle type

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of matter, called the Ether, was at first introduced to explain these activities, but has since been discarded. Moreover, the obvious behaviour of gross ordinary matter, indicated that the motions of matter are in some way conditioned by the spatial relations of material bodies to each other. Newton's laws of motion supplied a framework within which more particular laws for the interconnection of bodily motions could be inserted, and his great synthesis—the law of gravitation—was a stupendous success in the methodology of physics. But, says Whitehead, the forces which Newton introduced into Nature, left Nature still without meaning or value. The mass, motion and shape of a material body, provided no *reason* for the law of gravitation. "Even if the particular forces could be conceived as the accidents of a cosmic epoch there was no reason in the Newtonian concepts of mass and motion why material bodies should be connected by any stress between them; but the notion of stresses, as essential connections between bodies, was a fundamental factor in the Newtonian concept of Nature." In Newton's system, no ground is given why, in the nature of things, there should be any stresses at all. In short, Newton left all the factors of his system, mass, stress, etc., as disjointed facts, devoid of any principle explaining why they should be "together." "He thus illustrated a great philosophic truth, that a dead Nature can give no reasons. All ultimate reasons are in terms of value."

The elimination of the notion of empty space, as the mere vehicle of spatial interconnection, and the substitution of the notion of space as a field of incessant activity, has had an unexpected result in modern science. It has led to the abandonment of the notion of bits of matter as unchanging supports for physical properties. And the conception of the ether (regarded as a jelly-like substance) and of ordinary things like atoms, molecules, and stones, as "knots" in the ether has also been given up. "The modern point of view is expressed in terms of energy or activity, and the vibratory differentiations of space-time. Any local agitation shakes the whole universe. . . . Matter is a group of agitations, and this group is fused into its environment." It is important to realize the part played by the environment in the constitution of a thing. It actually enters into the nature of each thing. A group of agitations which we call a piece of matter, cannot, it seems, be detached from its environment. Consequently, says Whitehead, "there can be no such thing as a self-contained local existence." The notion of a self-contained particle of matter is an abstraction. What we call a permanent thing, such as a chair, a rock, or a planet, "is nothing but an average stability of certain elements in a set of agitations which are being propelled through a changing environment. In this average fact the time-factor takes the place of endurance, and change is a detail."

Nature as Process.—If we contrast the old doctrine of Space with the modern theory of space-time, we are impressed with the revolutionary nature of the change of outlook. According to the old doctrine, space was regarded as a substratum for certain entirely passive geometrical relationships between material bodies. That is to say, space whilst conditioning all the active relationships of material things, in no way *necessitated* them. According to the modern view there are no self-contained activities occupying limited regions. "Nature is divisible and thus extensive. But any division, including some activities, and excluding others, severs the patterns of process *which extend beyond all boundaries.*" With the view of Nature as an interrelated system of activities in which "change is paramount, the notion of space as a substratum for passive geometrical relationships is entirely inappropriate. The new physics must now perforce conceive Nature as a theatre of diverse forms of *process*. Consequently space and matter have been swept away, and

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physics has become the study of the internal relations within a complex state of activity. But since no group of activities can be abstracted from its environment which "seeps" into it and partly *constitutes* the group, in the last resource it must be recognized that in any complex state of activity "the whole universe of physical action, extending to the remotest star cluster, is involved."

Types of "Things" in Nature.—At this stage in his treatment of scientific conceptions Whitehead gives certain warnings which should be heeded in all discussions of Nature. In the first place, we must remember the differences of "scale," and the differences of time-span. For example, the apparent absence of change within a second of time, tells nothing as to change within a thousand or a million years. We are inclined to take the modes of functioning of the human body as prescribing an absolute scale, but as a matter of fact there is no absolute standard of magnitude. In the second place, all the special sciences presuppose certain fundamental types of "things," a "thing" being whatever we can talk about, such as molecules, colours, and other *sensa*, as well as values. A science is concerned with a limited set of various types of things. But further, scientific thought must determine what types of "things" are exhibited in any given situation. Must they be expressed in the form "This is green" or "All those things are green"? Whitehead maintains that every science strives to get beyond this Aristotelian mode of expression, namely, attributing a predicate to a subject. Indeed, in his view the dominance of the Aristotelian logic for over two thousand years in Western thought has been nothing less than a calamity. "All attempts to combine the set of special sciences into a philosophic cosmology, giving some understanding of the universe, are vitiated by an unconscious relapse into these Aristotelian forms as the sole mode of expression. The disease of philosophy is its itch to express itself in the forms 'Some S is P,' or 'All S is P.'"

Finally, in the "quantitative" stage of any science, when the typical questions asked are "How much P is involved in S" and "How many S's are P," we must be on our guard against a "simple-minded" treatment of these notions. Unless we are watchful and critical, such quantitative notions can be thoroughly misleading.

The Notion of "Pattern."—According to the author, the most important concept for the understanding of Nature is that of "pattern." He goes so far as to say that apart from a presupposed pattern, quantity determines nothing. What, then, is to be understood by the notion of "pattern"? The answer given is as follows: In the first place it involves the concept of different modes of "togetherness" of various entities. For example, in a chemical mixture composed of carbon atoms and oxygen atoms "there will be an enormous number of alternative patterns for a mixture of any reasonable amount of carbon and oxygen. And even when the purely chemical pattern is settled, and when the region containing the mixture is given, there are an indefinite number of regional patterns for the distribution of the chemical substances within the containing region."

In the second place, every science is an abstraction from the full concrete happenings of Nature. But when a science selects certain factors in Nature for the purpose of special study, *it loses sight of the fact that there is a certain influx of the "excluded" factors into the group of factors selected for investigation.* "Thus we see that any single pattern of factors discerned by a special science, differentiates itself into a subordinate factor in an indefinite number of wider patterns." The inference from this fact is patent. Every special science presses out beyond its artificial boundaries for inclusion in nothing less than a complete cosmology. It is therefore clear that to overlook the question of "pattern" is fatal to the understanding of Nature.

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We have seen that modern science has abandoned the view of Nature as consisting of bits of matter with certain qualities moving about in an otherwise empty space, and has substituted the notion of Nature as process, activity, and change. What, asks Whitehead, does this mean? What is being effected by Nature? "It cannot be that Nature's activities are merely the formulae of the multiplication table. Nature is full-blooded, and real facts are happening." The answers to these questions are given in the discussion on "Life," which is the subject-matter of the second part of the book, to which we now turn.

The Doctrine of Two Substances.—If Nature is considered apart from life, we are dealing with the notion of an activity which effects nothing. We are, in fact, saddling ourselves with a Nature without any content. Moreover, bare activity provides no intelligible principle of causation: we merely have a formula of succession. But it is clearly unsatisfactory to hold a view of Nature which says it is nothing but a *routine* which can be adequately described in physical and chemical formulae.

Whitehead maintains that the cause of such an unsatisfactory theory of Nature is the dualistic doctrine of two unrelated substances, matter and mind. It was Descartes who gave the clearest expression of this doctrine. According to Descartes, Nature consists of two substances, namely, (a) material substances with spatial relations, and (b) mental substances. These two substances are said to be entirely unrelated to each other: they are complete in themselves, and do not need each other for the fulfilment of their respective essences. This formulation of the problem of Nature in the sixteenth century in terms of two parallel unconnected substances, mind and matter, lacked comprehensiveness, since it left out of account vegetation and the lower forms of animal life. But the fundamental objection to the theory is that it made a sharp division between Nature and Life. In Whitehead's view, this dualism has poisoned all subsequent philosophy. If Nature is to be understood, both factors must be fused together. Nature must be viewed as a living and not a dead realm.

The Concept of Life.—In presenting an argument for an organic philosophy of Nature, it is important to make clear the notion of "life." In the first place the concept of life implies a certain absoluteness of self-enjoyment or *immediate individuality*. What is this self-enjoyment? It is, says Whitehead, "a complex process of appropriating into a unity of existence the many data presented as relevant by the physical processes of Nature." The self-enjoying individual arises out of this process of appropriation, and is called elsewhere in the author's philosophy an "occasion of experience." "Occasions of experience" or self-enjoying unities of existence are the real things which in their collective unity constitute the universe. In the second place, the process of Nature, in order to be intelligible, involves the notion of a creative activity belonging to the very essence of each occasion. Creative activity is that aspect of the process "which elicits into actual being factors which, antecedent to the process, exist only in the mode of unrealized potentialities." Here we have the notion of the self-creation of the ultimate individual unities, creativity transforming the potential into the actual. In the third place, the notion of life implies the character of "aim." By the term "aim" is meant "the exclusion of the boundless wealth of alternative potentiality, and the inclusion of that definite factor of *novelty* which constitutes the selected way of entertaining those data in that process of unification." In other words, out of many alternative ways in which "enjoyment" might be realized, only one is selected. It is clear that the entertainment of an "aim" involves the operation of something that is purely ideal in the process, and this ideal controls

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and directs the process. The process is what it is because its successive phases exist for the realization of a definite end.

Life, then, as exhibited in an individual occasion of experience, possesses the characteristics of self-enjoyment, creative activity, aim.

Sense Perception.—The important question to be decided is whether Nature as observed by us possesses this factor of life. The answer Whitehead gives is in the affirmative. But we will follow the author's argument in greater detail. In the first place, he says it should never be overlooked that the body always plays a part in sense-perception. We see "with" our eyes, hear "with" our ears, touch "with" our hands, etc. It is defective doctrine merely to emphasize the external reference of sense-experience, and to omit the part played by the body. In the second place, sense-perceptions are said to be "extraordinarily vague and confused modes of experience." By eliciting into prominence the *external reference* side of experience, they fail to disclose Nature in any but a superficial way. "In sharp-cut perception a paving stone seems to be hard, solid, static. But if physical science be correct, this is a very superficial account. It tells us nothing about the molecular activities of the stone."

Now it will be obvious that if sense-perception by its very nature is unable to discriminate the fundamental activities within Nature, Science, depending upon sense-perception as its sole source of observation, can make no claim to self-sufficiency. If it is only making use of half the evidence, we can understand why "Science can find no individual enjoyment in Nature, no aim in Nature, no creativity in Nature." To use a metaphor, it examines the garment worn by a body, but neglects to investigate the body itself. The other half of the evidence is to be found where there are purposes and values. Science certainly has done a great work in observing those extensive habits of behaviour called "laws of Nature." But it must be remarked there is no "necessity" in any of those ways of behaviour. "They exist as average regulative conditions because the majority of actualities are swaying each other to modes of interconnection exemplifying these laws." But, judging from analogy, it would seem probable that the present "laws" of Nature will fade into unimportance as new modes of self-expression gain dominance.

Nature and "Aim."—In that realm of Nature called "inorganic," Science has discovered that Nature, in the present epoch, is governed by certain massive habits, which are termed "laws." The discovery of these physical laws has been based upon sense-perception. They are abstract, and as such disclose no aim in Nature. But the exact opposite is the case in regard to the sociological functions of mankind. Men form purposes, and purposes are *directive* of their bodily activities. Consequently, the notion of "aim" is fundamental in the explanation of these activities. Now scientific reasoning is dominated by the presupposition that mental functioning is not properly part of Nature. This view Whitehead regards as a mistake. He maintains that there is no sharp division between mentality and Nature. Indeed, he goes farther, and argues that mental operations are among the factors which constitute Nature. To divide up Nature into groups, such as animal life, vegetable organisms, single living cells, large-scale inorganic aggregates, microscopic events, may be useful for the purpose of scientific classification, but such sharp-cut divisions are dangerous for philosophy. All these various modes of Nature not only influence each other and require each other, but actually shade off into each other.

The Body-Mind Relation.—The main method employed in the observation of Nature is through vision, but Whitehead gives two grounds for suspicion whether visual or any other sense perception discloses to us the metaphysical

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nature of things. In the first place, even in vision there is the intervention of the body: we see *with* our eyes. In the second place, "every type of crucial experiment proves that what we see, and where we see it, depend entirely upon the physiological functioning of our body." Since the same remarks apply to all other forms of sense experience, the truth that our personal experience of Nature is mediated by our bodies is indisputably clear. It is, therefore, of the first importance to have some understanding of the body-mind relation.

Firstly, the human individual is one fact, body and mind—a unity. In the second place, the functioning of our body has a much wider influence than the mere production of sense-experience. One of our fundamental experiences is of the derivation of emotion from bodily functioning. For philosophy, therefore, it is basic to recognize that the whole complexity of mental experience is either derived from the functioning of the body or modified by it.

But our immediate experience also claims derivation from another source. This second source is "our own state of mind directly preceding the immediate present of our conscious experience." We are aware that our present state of mind is a continuation of an earlier state. In mental experience there is a transition from one state to another, and the later is a fusion of new elements provided by our bodily functionings with the elements of experience provided by the state of our mind in the *immediate* past.

Thus the ego claims two sources of derivation, viz. the body and the antecedent experiential functioning. But there is only one ego which is a synthesis of the body and the stream of experience. Body and soul are inescapable elements in our unitary being, but neither body nor soul are to be so sharply defined as at first sight they appear to be. For example, the body is a complex unity of happenings within the larger field of Nature. As a structure of molecules, it is of its essence that it should always be losing molecules and gaining molecules. In fact, there is no definite boundary to determine where body ends and external Nature begins. In other words, body apart from its environment is an abstraction.

It is true that when we think of our self-identity we are inclined to emphasize the continuous stream of experience which we call the "soul" rather than the body; but the notion of soul is vague in the extreme. Consider the *continuity* of the soul. "So far as concerns consciousness, it has to leap gaps in time. We sleep or we are stunned, and yet it is the same person who recovers consciousness. We trust to memory, and we ground our trust on the continuity of the functionings of Nature, more especially on the continuity of our body." But this is to admit that Nature in general, and the body in particular, provides the material for the personal endurance of the soul. The soul cannot be separated from the body, and the body cannot be separated from Nature.

The Task of Philosophy.—Now that the implications involved in the notion of soul and body have been stated, we are in a position to see what is the task of philosophy. It is "to conceive the happenings of the universe so as to render understandable the outlook of physical science and to combine this outlook with those direct persuasions representing the basic facts upon which Epistemology must build." In Whitehead's view, Epistemology has been weak in the past because it has based its investigations upon a narrow formulation of sense-experience. By doing so, it excluded all the fundamental factors constituting our experience. Philosophy, which is an attempt to make the universe as a whole intelligible, cannot hope to succeed if its epistemology is limited to the narrow field of sense-perception.

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The External World and the Soul.—If we ask the question—What is the function of the external world for the stream of experience which constitutes the soul? the answer given by the author is this: "The experienced world is one complex factor in the composition of many factors constituting the essence of the soul." Since our emotions, purposes, and enjoyments are just the soul's reactions to the world which lies at the base of its existence, it can in one sense be truly said that "the world is in the soul." This, however, is only one side of the complete truth. The other aspect is the soul as one of the components of the world. "In any occasion of experience, the world is included within it in one sense, and the occasion is included in the world in another sense." It is important to elucidate a little more in detail this rather baffling relation between body and soul, body and Nature, Nature and soul. We may, for example, regard the soul as nothing else than the stream of successive occasions of experience. From this point of view, at any one moment I am the person embodying the totality of antecedent occasions. This, however, is only one side of the picture. It is equally the case "that any immediate occasion of experience at the present moment is only one among the stream of occasions which constitute my soul." Again, from one standpoint the world for a percipient is nothing else than the functionings of his body, and knowledge of the world an analysis of these functionings. From another standpoint "the body is merely one society of functioning within the Universal Society of the World." That is to say, we are constrained to interpret the world in terms of the bodily society, and the bodily society in terms of the world.

The Doctrine of Immanence.—From what has been said, there emerges a view of the world as a community of actualities interpenetrating one another. Each event is a factor in the nature of every other event. The whole antecedent world of occasions co-operate to produce an entirely novel occasion, and each novel occasion conditions in an important way its successor. This view of the universe involves, as the author maintains, a doctrine of immanence. Indeed, he thinks that only upon such a doctrine can any intelligible notion of causation be given. Why do events have a determinate status relative to each other? The answer is because "each occasion presupposes the antecedent world as active in its own nature." Why are the qualitative energies of the past combined into a pattern of qualitative energies in each present occasion? The answer is the same. Because the antecedent world functions in the creation of a new occasion. This immanence of the world of antecedent occasions in the creative advance is fundamental. "It is the reason for the transfer of character from occasion to occasion. It is the reason for the relative stability of laws of Nature. . . . It is the reason why, in the direct apprehension of the world around us, we feel that curious habit of claiming a twofold unity with the observed data. We are in the world and the world is in us. Our immediate occasion is in the society of occasions forming the soul, and our soul is in our present occasion. The body is ours, and we are actively within our body."

The Ego.—The preceding discussion has brought together the conclusions of modern physical science and the deepest persuasions dominating human life in its social functioning, as well as in its literature, art, and religion. As a result of the analysis a clearer knowledge of the nature of the personal ego emerges. The "I" of which we are conscious is not bare thought (as Descartes suggested), but is a unity of emotions, enjoyments, hopes, fears, valuations, decisions, and all of these experiences are subjective reactions to an active environment. That is to say, the unity of the ego consists in the process of shaping a multiplicity of material presented by the environment into a consistent pattern of feeling, and its individual enjoyment is what it is in its rôle of a natural activity moulding the activities of the environment

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into a new creation. "If we stress the rôle of the environment this process is causation. If we stress the rôle of any immediate pattern of active enjoyment, this process is self-creation. If we stress the rôle of the conceptual anticipation of the future, whose existence is a necessity in the nature of the present, this process is the teleological aim at some ideal in the future.

Nature and its Content.—We are now in a position to answer the question what content must be added to the notion of Nature as bare activity? It is clear that "life" is the content that must be fused with activity if we are to have a concrete conception of Nature. But life must be distinguished from "mentality." Mentality involves "conceptual" experience, "which is the entertainment of possibilities (*e.g.* alternatives) for ideal realization in abstraction from any sheer physical realization." Life, however, lies below this grade of mentality. It is the enjoyment of emotions derived from the past, and aiming at the future. The experience of emotion has what is called a "vector" character as its essence. That is to say, there is a receiving from the past, an enjoyment in the present, and a passing on to the future. Moreover, in every occasion of experience there is a union of transcendence and immanence. "The occasion is concerned in the way of feeling and aim with things that in their own essence lie beyond it, although these things in their present functions are factors in the concern of that occasion." Indeed, in virtue of the general community of occasions, each occasion in its self-creation is concerned in some degree or other with the universe.

Nature, then, in the author's view must not be divorced from "life" as defined by him. It consists of individual occasions which are in fact emotional unities. Each actual entity is a patterned texture of qualities always shifting as it is passed on into the future. The conspiring of the occasions of the past to form a novel occasion in the present is the creative advance of Nature. In the realm of inorganic nature studied by the physicists and chemists there would seem to be little or no conceptual mentality. Mentality is latent only, and novel sporadic flashes would seem to be inoperative. In inorganic nature the grand patterns pervading the environment are received and transmitted by each occasion with little, if any, novel change. As the author has said elsewhere, the occasions of inorganic Nature receive their inheritance, and proceed to store it in a napkin. But the various grades of the higher forms of life exhibit the effectiveness of mentality in a scale of degrees. The social habits of insects and the lower animals point to flashes of mentality in the past which have degenerated into physical habits. In the higher mammals mentality is seen to be an important factor in the direction of life. In man mentality is the ground of his entire world of systematized knowledge. If it be asked what is the peculiar rôle of conceptual activity in the scheme of things, Whitehead replies that the qualities entertained as objects in such activity may be regarded in the nature of catalytic agents as conceived in the science of chemistry. "They modify the aesthetic process by which the occasion constitutes itself out of the many streams of feeling received from the past." In other words, conceptual qualities possess the power of diverting the flow of energy, and by holding up mere "tradition" enable nature to escape from the rôle of repetition to create genuine novelties.

This brings to an end the outline of Professor Whitehead's latest book. It will be seen that the author claims that Nature must be interpreted as a living creative process having both goals and values, a doctrine which focuses many converging trends of scientific thought, and at the same time provides a philosophical justification for the intuitions of poets and mystics.

THE EDITOR.

PHILOSOPHICAL SURVEY

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(PLATONIC STUDIES)

PLATONIC studies continue to be cultivated, even in Italy, with undiminished fervour. And in Italy, as in England and Germany, interpretation tends to pass from one extreme to the opposite. At one time the chief concern of the exponents of Plato was to reconstruct his "system"; and since his thought did not easily lend itself to unification, every effort was made to force it within the limits of a preconceived scheme. The present tendency, however, is to start from the opposite standpoint—that there is no philosophy of Plato, only a variable philosophical activity which is, as it were, consumed in each dialogue in turn, to be rekindled inexplicably in the next. Hence the work of interpretation reduces itself to a summary of the contents of various writings, arranged as far as possible in chronological order, and each examined independently as a complete and self-sufficing entity. The systematic interpreters used to make all the dialogues burn with a single flame, for which is now substituted a series of *ignes fatui* in which the connection is lost, or only visible at intervals.

In a certain sense the reaction of contemporary exponents to the excessively systematic tendency of their predecessors is justifiable and beneficial. In their intemperate zeal for arranging in a single context the exuberant variety of Platonic intuitions, his former exponents used to end by superimposing themselves on the author and by exercising their imagination in bridging the gaps, or even sometimes the chasms, that separated one intuition from the next. On the other hand, the hermeneutic criterion of the moderns which substitutes for systematic continuity the more flexible and active continuity of philosophizing seems at first sight much more appropriate to the subject. But what vitiates it is an unconfessed sceptical presupposition as if Plato's philosophizing were exercised *in vacuo* instead of tending unremittingly towards a systematization of knowledge, though no single systematization could exhaust its activity. Rightly understood, the criterion of the moderns should lead us to the admission, not of a single fixed line embracing the whole Platonic philosophy, but of a number of lines of development, independent of one another to some extent, yet at times entangled together almost inextricably. Yet since the same dynamic impulse runs through all the threads, in the aggregate they give the impression of a single movement. But the perception of these relations requires that the examination of the Platonic writings should not be conducted dialogue by dialogue, considering each one by itself as a detached unit, but by studying the development of each theme and the manner in which analogous themes are related between different dialogues. And it is perhaps here that present-day criticism shows itself most wanting. It believes that the individual dialogues are homogeneous or organic unities, expressing well-defined phases of thought; on the contrary, they are heterogeneous and composite unities often held together by very extrinsic bonds, and the true organic unity is to be sought in the relations of similarity or contrast between the parts of different dialogues. Consequently it can be said without exaggeration that

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the progress of Platonic exegesis lies in the breaking of the formal literary unity of the dialogues and the recomposition of the resulting parts on a basis of more intrinsic criteria.

Among the more recent Platonic studies to which we referred at the beginning of this review we note what appears to us an example of the worse tendency alluded to above in a book by Ferro, and, on the other hand, an example of more truly searching interpretation in a book by Stefanini.

Ferro's book¹ is a sufficiently industrious summary, often a textual transcription, of a series of dialogues, arranged according to a plausible chronological criterion now generally agreed on. One could discuss the interpretation the author gives of this or the other controversial point, but with scant profit, because what is lacking in the book is precisely the sense of the problems or themes of Platonic thought that might give value and relief to particular discussions. I cannot see the utility of such summaries; the text of Plato might just as well have been transcribed, and furnished with some annotations. Ferro admittedly states in his introduction that he does not adhere to the sceptical presuppositions of those who refuse to see any systematic coherence in Plato's philosophy, and he promises further volumes in which he will complete the summary of the dialogues that he has left unfinished, after which he will give a synthetic exposition of the system. But in that it appears to me that he will unite the opposing errors of the systematic and the rhapsodical interpreters in his inability to find a *via media* that will surpass them both. The exposition of origins that he has undertaken should have led to the investigation of the systematic motives of Plato's thought, and instead he has let slip this opportunity, confining himself to a passive transcription of the contents of the dialogues. It is to be presumed that a beginning so arid and barren of essential motives must be offset by a correspondingly static systematization, lacking any sense of evolution. This is to unite the two errors rather than to eliminate them.

Far better than Ferro's is Stefanini's² book, which likewise contains a partial analysis of the Platonic dialogues (it stops at the *Phaedo*) and is to be completed by a second part, but the specimen of interpretation which it gives is a guarantee of the excellence of the method. Stefanini not only shows himself convinced of the necessity for a criterion of interpretation which shall temper the systematic point of view with the genetic, but he carries it out, studying the dialogues in their mutual relations and continual interferences. Certainly the "dramatic" writings of the first phase of Plato's thought do not afford adequate material for the full scope of this method; still the reader has the definite impression that the interpreter is fully aware of the problems of Platonic philosophy and does not passively echo or abridge the raw material of the contents of the dialogues. In his introduction the author affirms, "anyone who claims to produce a consistent and homogeneous Plato, denuding him of all contradictory elements, succeeds not merely in impoverishing him but in annihilating him, reducing his work to a collection of rhapsodical philosophies, attributed to an imaginary name. . . . To purify Plato of his contradictions is to destroy him" (p. xx). And conformably with this premise he gives us a full and lively review of the difficulties in Plato and the complex spiritual themes that are entangled and unravelled in the sinuous course of the dialogues.

To turn to the more detailed analyses, that of the *Symposium* seems to me felicitous enough. Stefanini brings light to bear upon the conflict that is

¹ A. Ferro, *La filosofia di Platone* (dai dialoghi socratici a quelli della maturità) Roma, Tip. del Seriato, 1932 (octavo, pp. 267).

² L. Stefanini, *Platone*, I. Padova, Cedam, 1932 (octavo, pp. lxxxii-318).

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there revealed—perhaps for the first time in a definite form—between the two inspirations, noetic and dianoetic, of Plato's thought. Are the ideas the object of an immediate intuition or of a discursive dialectic process? In the first period of Plato's activity the discursive dialectic process had seemed to him the perfect instrument of knowledge. His dissatisfaction with this attitude begins to show itself in the *Meno*, in which it is made plain that reasoning presupposes some fundamental intuitions which cannot be linked with a logical connection. "The *Symposium* marks the completion of a forward step. The function of the *doxa* is no longer merely necessary but begins to preponderate with respect to the discursive process. Eros is the symbol of the *doxa*: the presentiment of truth, knowing antecedent to knowledge, without knowledge" (p. 226). It seems to me right to make this identification between Eros and the *doxa*, which foreshadows the transformation of the concept of the *doxa* itself that takes place in the dialogues of the last phase. But I do not think that the antithesis between Eros-*doxa* and the discursive process is well founded. Rather there is identity between them, even if in Eros the passional force of the *discursus* is more accentuated. It seems to me that the opposition is more marked between the noetic and the dianoetic in the contrast between the pure intuition of beauty and the movement of the erotic spirit that tends towards it (to generate in it). In general the contrast springs from an irreconcilable dualism in the viewpoints of Platonic thought; when it starts from the point of view of ideas the intuitive and noetic attitude prevails, while, on the other hand, when the point of view is that of knowledge, the activity of the mind, the dianoetic attitude prevails, and the *doxa*, which when compared with ideas loses in value, acquires a positive dynamic significance. That is why the dialogues of the last phase, from the *Sophist* onwards, in which the themes of the activity of the mind and of dynamic causality occur more frequently, seem to give the impression of the subordination of the abstract and static idealism of the first phase. Actually for Plato the idea remains always transcendent, but the point of view is changed and the new subject of investigation implies that dynamism which would be foreign to the pure idea.

Even in the *Phaedo* and the *Republic* Stefanini rightly sees a twofold contradictory attitude, both noetic and dianoetic. In an objectivistic conception the discerning faculties ought to conform exactly to the qualities of the object of which they are conscious, so that understanding corresponds to being. Corresponding to the positions of being, not-being, and becoming are knowledge, ignorance, and opinion in the subject. Knowledge can only consist in a pure intuition of the ideas. This, observes Stefanini, is the psychology of the ontologist, who isolates pure intuition from the inferior activities of the soul in order to obtain the exact adherence of the subject to the absolute object. But this is not altogether Plato's position. The objectivistic requirement interferes with the more fundamental and original need to strengthen the subjective element of consciousness (pp. 249-251). These observations are very just, and let us add that it is only from this point of view that it is possible to explain the dialogues of the last phase.

GUIDO DE RUGGIERO.

(Translated from the Italian by CONSTANCE M. ALLEN.)

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Idealism: a Critical Survey. By A. C. EWING, M.A., D.Phil., Litt.D. (London: Methuen & Co., Ltd. 1934. Pp. viii + 450. Price 21s. net.)

Dr. Ewing's book is a very long one, with numerous and sometimes very important footnotes. In his conscientious desire to be exhaustive, to be sympathetic, and to be fair, the discussion becomes loaded, possibly overloaded, with arguments, objections, and counter objections, and the central theme is often in danger of becoming lost. In consequence a review presents a most difficult task and must be confined to indicating Dr. Ewing's aim and accomplishment and to a consideration of only a few of the many points raised and discussed.

He sets out to examine idealism in order to discover what is tenable in its position, believing that realists have rejected it in a too wholesale manner and have thrown away much that is vital even for realism. His own position is somewhat that of "meeting extremes" and expresses probably a tendency to which Bosanquet drew attention, and to which Professor Kemp Smith gives expression. The term idealism is not easy to define; and it is not clear why he should use such a phrase as "the term idealist as ordinarily understood in philosophy" and thereby imply that there is any common meaning at all. He refuses to identify with idealism the view that mind or spiritual value is dominant in the universe; for this might be or is maintained by a theism which need not be idealistic; rather what is distinctive of idealism is a type of argument used to reach such a view; and what he undertakes is an examination of this type of argument. Though the idealistic argument may be and is rejected, the validity of the view which it claims to establish remains unaffected one way or the other, for it may be defended by another, non-idealistic, form of argument.

Various forms of the epistemological argument are considered—that *to exist* is equivalent to *to be perceived*, *to be known*, or *to be experienced*, that the mind plays some part which may be described as *construction*, that relations are internal and knowledge is a relation, that there is a connection between knowledge and purpose (a view associated with Royce); all these, familiar to professing philosophers and to the philosophic reading public, as well as Hegelianism, which Dr. Ewing treats with prudent reserve, are found, when once confusions and ambiguities are removed, to be untenable. There emerges only one point which seems to be idealistically important; it is what is involved in the scientific reference to an *observer* or the reference in cognition to what something *would be* for a mind that is knowing or observing. Even this, however, as Dr. Ewing points out, still leaves an important realist element because of the distinction between the *observing* and *what is observed*.

Kant, because of his influence on idealism and philosophy generally, receives a special chapter in which an attempt is made to decide in what respects he is an idealist, what is and what is not tenable in his theory, and what contribution he made to idealism and generally to a solution of the problems of philosophy. Many of his points are jettisoned. The doctrine of synthetic *a priori* judgment is, fruitfully, reinterpreted as a problem of inference—how conclusions can follow from their premisses and yet give knowledge not already contained in these premisses; his theory of space and

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time and intuition, in general leaves no room for inference at all; the mentalism present in his doctrine is discarded; not synthesis but the Kantian idea of synthesis is rejected because it presupposes that *sensa* are disconnected and that synthesis is an act of the mind; Kant's claim that to regard space and time as appearances enables the contradictions, supposed to be inherent in space and time, to be overcome, is opposed. The contributions of Kant to idealism and to philosophy are enumerated, somewhat summarily, as if Dr. Ewing were smitten with compunction for his critical handling of a great philosopher. Nevertheless, though Kant is an idealist, there is yet, as Dr. Ewing, like Professor Kemp Smith, notes, a realist element in his effort to save the objectivity of the physical world; but his attempt is so full of difficulty that it is charitable to say that he was feeling his way towards a realism within idealism.

The theory that relations are internal, so much stressed by idealists, is discussed in a long and elaborate chapter that unmasks a degree of confusion and ambiguity which constitutes a philosophical scandal and would lead to the condemnation of individuals in other than philosophical pursuits. It raises a topic of great importance for Dr. Ewing's own view. Ten different possible meanings of the theory are enumerated; but most of the idealistic arguments for the various meanings given by idealists to the theory cannot be sustained. Idealists might and probably would refuse to be compromised by the citation of *arithmetical* relations, which Dr. Ewing gives in abundance, and might maintain that they were concerned with relations between concrete existences and not with abstract ratios between numbers. Dr. Ewing might have clarified the discussion by considering whether idealism was seeking to maintain some general doctrine and whether the latter could be examined on general grounds. Was it anxious to maintain that *to be* and *to be related* are equivalent, and was it assuming that there is some relation that is of fundamental metaphysical importance? Stated in this way the theory is seen to be a more general form of the doctrine that *to be* is to be *perceived* or to be *known* or to be *experienced*. There is one fact which idealists may have in view—a fact to which Dr. Ewing draws attention and which, it must be admitted, seems to give support to the theory. It is that many properties of a thing, *e.g.* malleability, fusibility, etc., of gold, presuppose its being related; and it may be that *all* the properties of a thing are similar in this respect, certain factors, *e.g.* constancy, leading us to overlook the possibility. Such a view of a thing, though it might require us to surrender the ordinary notion of a thing, and the idealist identification of *being* and *being related* are full of difficulty and apparently contradictory; most people, like Dr. Ewing, are convinced that something must exist in order to be related. The difficulty in regard to relation is that there are many types of relation; but in view of what idealists say about the whole and its members, the relation seems to be one of logical inferability or one of causal determination, somewhat vaguely conceived. It is possible that most, if not all, of the meanings enumerated by Dr. Ewing are due to some such belief as that the identification in question is self-evident or that *to be* conditions or is conditioned by *to be related* or that *to be* is logically inferable from *to be related* or that *to be related* is logically inferable from *to be*.

Though the internality of relations could not be sustained by the idealistic argument, Dr. Ewing thinks that such a conclusion can be reached by an analysis of causality. The notion of causality is extremely important for Dr. Ewing's criticism of idealism and for his own theory; for it plays a fundamental part in his interpretation of coherence and, through coherence, in his view of physical objects and the universe. His view, stated generally, is that the "regularity" view of causation, though it contains the minimum necessary,

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is not adequate; to account for human action and for memory, and to provide an adequate theory of inference, causality must be regarded as an intrinsic or inherent connection, as a relation that involves logical entailment, as an *a priori* feature of the universe, as a category freed, however, of Kant's subjectivism. Causality is internal in the sense (1) that it follows from the nature of its terms, otherwise than mere regular sequence, (2) that it could not have been absent without at least one of its terms being different, (3) that the cause could not have existed without the effect following nor could the effect have existed without being preceded by the cause. Causality, since it involves logical entailment, is internal also in the sense (4) that the nature of one term is logically dependent on that of the other; and for a mind possessing the requisite insight, it is internal in the sense (5) that cause and effect are so related that determinate characteristics of the one can be deduced *a priori* from the other. The relation of causality is also a "generator of internal relations," that is, wherever C causes E, characteristics of C, other than the characteristic of being cause of E, are internally related in the above senses to E or characteristics of E.

The relation involved in knowing does not coincide with the causal relation; it is internal in senses (2) and (5), and, if epistemological idealism is assumed on other grounds, in senses (3) and (4). This means that the theory of internal relations does not support epistemological idealism and hence that what is known exists independently of being known. The nature of this relation is examined more fully in a discussion of coherence as an account of the nature of truth. The ideas of correspondence and of coherence both have difficulties; but Dr. Ewing seeks to give an interpretation of correspondence which he considers essential to the meaning of truth and which is better expressed by the phrase "in accordance with." In a discussion of coherence as a criterion of truth Dr. Ewing contends, rightly, that coherence is used as a test; and he enumerates the contributions of the coherence theory in this connection. In both discussions, however, he is adopting a realist attitude which is not present in the idealistic theory of coherence; for idealism seems to deny that a "fact" is anything else than an interpretation dependent upon and coherent with a system of interpretations, that, in short, *to be true is to be related to a system*.

The third topic under coherence is reality as a coherent system. Many confusions have to be cleared away. In particular the doctrine of degrees of truth has been held (1) to follow from the coherence theory of reality and the internal theory of relations, and (2) to be absurd. Its absurdity was thought to condemn the coherence theory. Dr. Ewing maintains that this condemnation is not involved because the doctrine of degrees of truth does not follow from that theory; but this seems to be the case only because he has adopted a more realist position. Is reality, then, a coherent system? A coherent system, as defined by Dr. Ewing, is "a set of propositions in which each one stands in such a relation to the rest that it is logically necessary that it should be true if all the rest are true, and such that no set of propositions within the whole set is logically independent of all propositions in the remainder of the set." What is important for the idea of coherence is that there should be no two or more systems of propositions logically independent of each other. In defining logical independence Dr. Ewing says that two sets of propositions are logically independent when no proposition in one set either entails or excludes . . . any proposition in the other set. The word *excludes* is obscure and troublesome and seems to mean exactly the opposite of what he intends to mean. The weight of his argument is really upon "logical entailment"; and, granted that his view of causality is accepted or that the coherence theory of the criterion

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of truth is valid, it follows that the universe is a coherent system. But so interpreted the theory does not entail idealism, for it does not follow that what exists could not exist if it were not known. In a section dealing with rationalism and empiricism, where it is maintained that the difference between them turns not upon whether our ideas have all been derived from experience but upon whether and how far synthetic *a priori* knowledge is possible, this being a problem of inference, he argues, against the prevailing tendency to make all inference analytic, that there are synthetic inferences and that hence there are relations of logical entailment, as has been rightly assumed by the advocates of coherence, between different facts in the real world.

The first point in this theory that may be considered is the argument for causality. Some of the points made against the "regularity" view are not convincing. We do not refute the view that the earth moves round the sun by saying that it makes nonsense of people's remark that the sun rises and sets; and so with the "regularity" view and the statement that something occurred because I willed it, unless the latter statement is based upon insight into connection other than regular sequence. The argument from memory does not carry one very far in the absence of any clear understanding of memory. Since Hume's time, however, discussion on causation has linked the latter with inference. Hume was interested, primarily I believe, in the question: on what grounds do we proceed to form and to believe a general proposition on the basis of instancial evidence? But, secondly, he denied that the principle of causation or the principle of the uniformity of nature was the ground or could guarantee the certainty of our general conclusions: and, thirdly, he put forward a theory of his own, whether satisfactory or not is irrelevant at the moment. Kant did not meet Hume's difficulty by arguing for causality in the universe; he had to show, what he never did, that any specific generalization must be true because that principle is valid and that it is the basis of the inference. Kant seems to have clung to the belief in the mental character of the *a priori* because he thought, mistakenly, that certainty was thereby somehow guaranteed. But Dr. Ewing rejects this feature of the *a priori*, causality being for him a purely objective character of the universe; he maintains that there are relations of logical entailment between facts in the real world; and he admits, what is supported by the fact of so much controversy about causality, that it is not discovered. It may be admitted, with Dr. Ewing, that something may entail something else, even though no human mind knows these somethings. Nevertheless, inference requires both logical entailment and knowing it; and strictly, therefore, in inference the relation must be known; otherwise we could never say that our inferences are logically necessary. In fact, according to Dr. Ewing, what we know is the important thing, for "our premisses are not the objective facts as such, but only what we know about them before making the inference." The cards, as it were, must be all on the table. If, however, inferences are logically made and if they are made on the basis of the data before the mind, and if causality is not known, then inference is not dependent on causality, but is obviously dependent on something else. Dr. Ewing writes in places as if the causal and the logical were distinct. It is possible, however, to hold that logical relations are not a class of relations additional to the types of concrete relations discovered in the real universe but are properties of the latter and that inference depends on them. But this view simply reinforces the conclusion that the fact of even legitimate scientific inference provides no basis for Dr. Ewing's (or for Kant's) argument for causality, for it is impossible to know whether causality possesses logical entailment if we do not know the relation in question. It is probable, therefore, that Dr. Ewing has only argued for what he takes causality to mean and what

it would imply if it were a feature of the real universe, and that he has not shown that it is actually such a feature.

A second point is Dr. Ewing's view of reality as a coherent system. Its relation to the idealist view is not easy to decide, mainly because the latter is full of obscurity, but partly also because of his own exposition. He seems in places to be maintaining that a term's *being* is not exhausted by any one relation and to be denying that all relations are of such a kind that a term's *being* is exhausted by all relations. Thus for him *to be* and *to be related* are not identical; and he would be upholding a less general position than that of idealism. He says, however, that a consequence of the coherence theory, this being here assumed to be his own theory, is that no physical object we know could have been what it actually is in a universe in which no minds ever existed or were ever going to exist. Are we entitled to suppose that a thing might have been different and yet be that thing? If we are not, then the position is that *to be* is to be related in a system of which minds are actual or potential members, or that the being of a thing is dependent on a system or the whole; and this is very close to what idealism was probably arguing for. It so happens that Dr. Ewing defines idealism in epistemological terms.

In the discussion on physical objects, the main problem concerning which might have been more clearly and definitely stated, it is maintained (1) that the phenomenalist view (in one sense of phenomenalism), that all our ordinary statements about physical objects can be analysed into statements about *sensa* must be rejected and that phenomenalism fails to meet at least eight conditions which any theory must satisfy; (2) that a representative theory of knowledge is to be distinguished from a representative theory of perception, and that knowledge may be direct although perception may be representative; (3) that the fact of illusions in particular favours the representative view of perception; (4) that the belief in independent physical objects can be defended by means of the idea of a direct or non-inferential cognition, by a causal argument to the effect that we are driven to assume and search for some cause of our *sensa*, this cause not being experienced by us and consequently the characteristics assigned to it being the characteristics of the objects immediately experienced (*i.e.* mental states and *sensa*), by the argument that the belief renders experience coherent, and by an argument from "inverse probability" to the effect that experience goes on and has gone on so long as if there were independent physical objects resembling our normal *sensa* and that the probability of the belief seeming to be true without being so is so small as to make the hypothesis a reasonable one. Dr. Ewing is too alert to overlook the difficulties involved, and would only claim to be formulating the best possible case for the belief.

The idea of a non-inferential cognition has been sponsored by others and possibly even by Descartes (*Med. ii*); but when taken in conjunction with the view that a physical object is a group of unsensed *sensa*, it provokes the question, what is it that is cognized? A more general difficulty is presented by the term *sensa* and by the causal argument in this connection. One is apt to get lost amidst references to *sensa*, unsensed *sensa*, objective *sensa*, sensible qualities, secondary qualities of *sensa*, and so on. Dr. Ewing says that "*sensa* are not qualities"; and it is clear that if a *sensum* exists only so long as one perceives it or if it is dependent on some mind, and if a quality of an object persists even when we do not perceive it, a *sensum* cannot be a quality of an object; and if this is true of *sensa* and if physical objects are groups of unsensed *sensa*, it would seem that physical objects do not persist nor exist independently, unless the term *sensum* is being used with a double meaning. The adoption of the representative view of perception leads him, in order to defend

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the possibility of knowledge of objects, to argue that the *sensa* we have represent *sensa* similar to themselves and that we can accept this if we hold that our *sensa* are caused by unsensed *sensa* similar to themselves. In view of our experience of so-called causes it is not necessarily the most reasonable conclusion that there is this similarity. Does the fact of illusions in particular necessitate the adoption of a representative theory? Much depends upon the way in which the problem is understood. What is not clear is why Dr. Ewing should hold that our *sensa* are caused by and represent *sensa* similar to themselves. The evidence seems strong that physical objects are not perceived directly and hence that *sensa* are not directly perceived to be qualities of objects. But it still remains possible that the qualities are among the *sensa* we do have or that some of our *sensa* are qualities of objects, and that they are not merely similar to unsensed *sensa* or caused by them. Ordinary men do believe that much that they sense are qualities of objects and not merely representative of them. The fact of illusions points to a distinction between *sensa* that are and *sensa* that are not qualities of objects and the problem that arises is as to how this distinction is effected.

A final chapter, after a preliminary commendation of Berkeley, proceeds to examine various arguments of a metaphysical nature, propounded by idealism, in favour of the view that whatever exists is dependent on or must be experienced by a mind or must be of the nature of experience, and that such a mind must be a non-human mind. Dr. Ewing rejects the argument, based on the belief that the nature of relations implies mind, that, as finite existences stand in many relations of which no one is conscious all the time or at all, there must be a non-human mind which apprehends them, for he refuses to admit the implication asserted. He rejects also Absolutism and Panpsychism; and he rejects the argument that the nature of universals and values requires a divine mind to be postulated for which they are present. His discussion here is very valuable in view of the stress which idealism has laid upon value and because idealism, though largely through historical accident, is associated in the minds of many with value. He formulates what he himself considers the most commendable idealistic view: granted that physical objects exist independently of human beings and that they are yet dependent on a mind, it follows from these two propositions together that they are dependent on a non-human mind. This position is very close to theism. It is, however, difficult, in view of the first proposition, to establish the second; and Dr. Ewing can find no evidence for accepting the argument. The conclusion he reaches is that the attempt to prove the existence of a divine mind by specifically idealist arguments has failed. This does not mean that he rejects the belief in a divine mind, but only the idealistic approach to that belief. He is prepared, he states, apart from certain considerations, to accept the view not specifically idealistic but theistic, that the order and system so prominent in the world we know strongly suggest the presence in some fashion and sense of a mind controlling the universe; but this view is not elaborated.

Many points in Dr. Ewing's detailed and exhaustive discussion have not been touched upon, and probably those that have been noted may have been misunderstood. Readers, however, will find the volume informative and valuable, even if only as a storehouse of arguments. The analysis of questions and of different possible meanings, which no doubt reflects the influence of the Cambridge mode of philosophizing, while it may seem tedious, justifies itself in revealing the obscurities of philosophical systems. Though to philosophical philistines the result may appear to be a very effective "debunking" of philosophical speculation in view of the daring constructions that have been reared on linguistic ambiguities and erroneous conclusions, yet to

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philosophers discussing philosophical secrets among themselves it is a very important work in clearing away much misunderstanding, misinterpretation, and bad reasoning committed by very eminent thinkers.

B. M. LAING.

Introduction to Green's Moral Philosophy. By W. D. LAMONT, M.A., D.Phil., Lecturer in Moral Philosophy, Glasgow University. (London: George Allen & Unwin Ltd. 1934. Pp. 224. Price 7s. 6d.)

Only one who has felt the difficulty of Green's *Prolegomena to Ethics* (partly due to his not having had the opportunity of revising it for publication, but partly also to its inherent difficulty) can fully appreciate the simplification of it that Dr. Lamont achieves in this volume. Only one who for the last forty years has merely had occasion to refer to particular passages can fully appreciate the multitude of things, both old and new, that he succeeds in bringing forth from it. He claims for it that "from the historical point of view it is undoubtedly the greatest treatise on Moral Philosophy produced by the British school of Idealism." And, going back upon it, even with Bradley's genius-lit *Ethical Studies* in mind, one is inclined to agree with him. It is certainly astonishing how well it wears; and I can think of no more excellent discipline for a generation, pampered with text-books on Ethics, than to be sent back to Green's massive pages under so reliable a guide. Agreeing, as we must, that edification is no part of a philosopher's work, we may yet regard it as an advantage that, as Dr. Lamont puts it, "students of the subject have here the character of a great citizen occasionally falling under the keen scrutiny of a great philosopher." The exposition falls into three parts: the first on "The Psychology and Metaphysics of Morals," corresponding to Books I and II in Green; the second on "Moral Theory," corresponding to his Book III; the third on "Moral Theory and Moral Practice," corresponding to his Book IV. To these is added a critical Appendix, consisting of six "Notes" on "The Metaphysic of Knowledge and Nature" and of "The Good Will"; "The Conception of Reality as a System of Unalterable Relations"; "The Concept of Evolution"; "On Effects, Intention and Motive"; "The End as Common Good." In the expository portion occupying the main body of the book, the author has rightly allowed himself considerable latitude of statement and illustration, sometimes with very happy effect. Particularly good seem to me his treatment of character and circumstance, of motive and intention, of the meaning of good, and of the relation of moral theory to moral practice. But it is to the critical "Notes" that the reader familiar with Green will turn with the greatest interest. Many points here invite comment. I have only space to mention the fundamental one of Green's metaphysical basis. I think that Dr. Lamont is here right in emphasizing the distance that separates Green from the subjectivism which threatens Kant's doctrine of the place of the Understanding in "making" nature, though he might with advantage have noted that it is Erdmann and not Kant who is responsible for this phrase and for the distinction between "making" and "creating." He is, I think, further right in noting the ambiguity in Green's metaphysical basis, arising from the two lines of argument by which he tries to establish the existence of a spiritual principle in nature: that from the relation of subject and object in knowledge, and that from the relation of matter and form in reality. My only doubt is as to the way in which Dr. Lamont conceives of the order in Green's mind of these arguments. I agree with him in holding that the latter, taken in the sense of the implication in all spiritual activity of the idea of an as yet unattained, perhaps to

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finite beings, as finite, unattainable, totality and unity is the real heart and soul of Green's metaphysics. I merely question the accuracy of describing it as his "real," in the sense of "actual," starting point (p. 184). Is it not that towards which, in spite of his actual epistemological starting-point, the deeper logic of his thought was driving him? Is it not this that makes his position so interesting as transitional between an Idealism founded on a theory of knowledge, like that of the neo-Kantians, to one founded on a theory of value such as we have in Bradley and Bosanquet? To have recognized this more clearly would, I think, have enabled Dr. Lamont to do more justice to Green's doctrine of Relations and his implicit recognition of a supra-relational aspect both of knowledge and reality; perhaps also to his definition of the Good Will, as indeed a circle but not a "vicious" one, and of the General Will as involving an implicit recognition on the part of individuals of a common good which is the ground of all *de jure* rights and duties. But I do not wish to end this notice in a key, even though a minor one, of criticism. I will therefore conclude by saying that in giving us this book the author has pretty well "told me my own dream" as to the meaning and place of Green's work in Moral Philosophy.

J. H. MUIRHEAD.

Liberty and Natural Rights. By W. R. INGE, Dean of St. Paul's. The Herbert Spencer Lecture delivered at Oxford, May 9, 1934. (London: Oxford Clarendon Press, Humphrey Milford. 1934. Pp. 38. Price 1s. 6d. net.)

"I confess," writes the author, "I have been amazed and appalled by the total and almost unresisted destruction of liberty in one great European country after another. I could not have believed, twenty years ago, that such a thing was possible." The invitation to deliver this lecture has given him the opportunity of making a notable pronouncement upon the subject of the value of liberty to civilization and the danger we run of losing it, so soon as national unity is sacrificed to irreconcilable class divisions. "Democracy," he truly says, "can exist only in a society in which conflicts are not *à outrance*." Speaking of Herbert Spencer at the beginning, he pays eloquent tribute to the generosity and truth of his "two fundamental convictions—his hatred of war and his love of liberty." But he is not blind to his mistakes. While Spencer saw "that the nemesis of militarism is the loss of liberty and vice versa," he did not see that militarism and industrialism may be parallel forms of the same type of society, and that, in the first half of the nineteenth century, "unrestricted *laissez faire* instead of promoting individual liberty was destroying it as effectually as a military despotism." On these grounds Dean Inge rejects the teaching of Spencer's *The Man versus the State* in favour of that of Mill's *On Liberty*, "one of the great little books of the world," which he recommends as the best antidote to the fascination which the alternative of Dictatorship is at present exercising on the younger generation. The review of ancient, mediæval, and modern theories of natural rights which follows is a delightful mixture of the erudition, wisdom, and wit we have learned to expect from the Dean of St. Paul's. What could be wittier than the statement (in reference to Spencer's unbounded hope for the future) that "Hegel might not have accepted it since his absolute had already realized himself quite creditably in Prussia"? or than the reply to James I's defence of the doctrine of the divine right of kings on the ground that even a bad one may have been inflicted upon

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a people for their sins: "The English people ended by deciding that, sinful though they no doubt were, they had not deserved the Jameses"?

But while offering hearty thanks for this "great little" tract, in writing a notice for *Philosophy* and recalling all that has been written since 1858 in the relation of the State to the individual, I confess to a certain disappointment. With all the admiration which we share with Dean Inge for Mill on Liberty, we feel bound to ask, as has often been asked by writers who are neither Spencerians nor Hegelians, whether in the crucial fourth chapter "Of the Limits to the Authority of Society over the Individual" there is any real light to be found in the wholly illusory distinction, which Mill tries to draw, between other-regarding acts which are a legitimate object of interference by the State and self-regarding acts which are not. The lecturer himself on p. 32 shows how the appeal to an abstract Law of Nature in Mill's hands fails to give any guidance on a number of practical problems such as the right of the State over the property of individuals in time of peace, over their lives in time of war, over their right to spread poisonous opinions or to sell poisonous drugs. He even notes the absurdity of Mill's approval of restrictions on the latter while he hesitates over opium. In particular one misses in the lecture any allusion to the book, which for a generation has been widely recognized as containing precisely the correction of the abstractions both of Mill and Spencer: the late T. H. Green's *Lectures on Political Obligation*. I am not myself sure that we can to-day unreservedly accept Green's conclusions in special points of the function of the State. What I am sure of is that his definition of its general function, as that of maintaining the essential conditions of the good life among "equals and likes," is a great advance on Mill's, and that in any attempt to get at the root of so important a matter we cannot afford to ignore it.

J. H. MUIRHEAD.

The Essence of Plato's Philosophy. By CONSTANTIN RITTER. Translated by Adam Alles. (London: G. Allen & Unwin, Ltd. 1933. Pp. 413. Price 16s.)

It is well that the fruits of Professor Ritter's lifelong study of the Platonic writings should be made available at last to English readers. If choice had to be made between his two books it is probable that this was the better to choose. For it may be presumed that those who need his longer two-volume work have sufficient German to be able to use the original, and this shorter book, which in German bears the title *Kerngedanken der Platonischen Philosophie*, is intended for a wider public and demands no knowledge of Greek. Among English readers also it should appeal to all who are genuinely interested in philosophy.

In substance the book is neither an attempt at a systematic digest of Platonic doctrine, nor an account of Plato's development. Again, it is not, like Professor Taylor's standard book, a review of the dialogues *serialim*. For Dr. Ritter, as for many students of Plato, the dialogues seem to fall into two main groups, which merge into one another at the time of the composition of the *Republic* and the *Theaetetus*. At this time, it is implied, Plato really began to find himself as a philosopher: what precedes, whether "Socratic" or not, is preliminary. If we are to find a body of doctrine which can be reasonably called Platonism, we must find it in the later dialogues. Therefore Dr. Ritter reviews the earlier dialogues briefly and in sequence under the two heads "Ethics" and "Ontology" in Part I, closing the series in the first

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case with the *Republic* and in the second case with the *Theaetetus*; and Part II, while not neglecting the chronological order, presents a more systematic aspect, and constitutes more than two-thirds of the whole work. In this Part the doctrine of the later dialogues (from which the *Republic* is not altogether excluded) is digested under the headings "Epistemology and Ontology," "Logic," "Philosophy of Nature," "Ethics and Politics," "Philosophy of Art," "Thoughts Concerning God." Thus the book lays most emphasis on the later dialogues; and this emphasis has its value for the English market, in which the middle period represented by the *Republic* and the *Theaetetus* is apt to be given perhaps excessive prominence.

The book is evidently intended as a contribution to philosophy rather than to the history of philosophy. Little space is devoted to Plato's predecessors or contemporaries. The Platonic doctrine is not presented primarily as a solution of problems that agitated the society in which it was born, but rather as a contribution to *philosophia perennis*. "To me," writes the author in his concluding words, "he is a philosopher second to none; an artist of first rank; a man favoured by God as few others have been; unforgettable for all time; releasing spiritual powers which have been a blessing to many and which will continue to be a blessing for all time." This sentence represents faithfully the spirit of the book. A critical reader may feel at times that the author is inclined to gloss over an error or exaggeration—I feel this myself, for example, when Dr. Ritter discusses Plato's attitude to empirical investigation—but he will be glad to be introduced to Plato by a writer whose wholehearted admiration for his subject does not allow him to surrender lightly any cardinal Platonic position.

It should be emphasized that this is a book for students, not a mere appetizer. Dr. Ritter is not a popular expositor, as the term is understood in England and America. His criterion of selection is not the interests of the general reader but philosophical significance, and therefore he is not always easy reading. But for students of philosophy, whether Hellenists or not, the book will be most valuable, and to all such it can be confidently recommended. It is, in fact, a highly concentrated extract of Platonism, representing the considered view of a most accomplished student of Plato's writings, and it deserves careful and repeated perusal.

J. L. STOCKS.

S. T. Coleridge's Treatise on Method as Published in the "Encyclopædia Metropolitana." Edited with Introduction, Manuscript fragments, and notes for a complete collation with the Essays on Method in *The Friend*, By ALICE D. SNYDER of Vassar College. (London: Constable & Co., Ltd. 1934. Pp. xxvii + 92. Price 6s. net.)

The *Treatise on Method* is the sole surviving relic of what Miss Snyder calls one of Coleridge's "most dramatic intellectual adventures." Unfortunately it was in his own eyes a somewhat damaged one, seeing that, besides being his only contribution to an enterprise in which he had hoped to play a much larger part, it had been so "bedevilled" by the editor of the *Encyclopædia* for which it was written as the Introduction that he was fain to disown it, and use the matter of it for another purpose. It is the extent of the "bedevilment" that, in the absence of any trace of the original manuscript, constitutes the problem which an editor has to solve by a careful comparison of the text with that of the corresponding sections of *The Friend* where this matter reappears. Miss Snyder has added to the deep debt which students of Coleridge's prose works already owe her by performing this task

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in a manner that seems to me to leave nothing to be desired. We have in her book what is likely to be the classical edition—the tenth as it would seem of the *Treatise* in one form or another. Odd that we should have had to wait for it for a century after Coleridge's death! One reason is doubtless the one already indicated. We have in *The Friend* (Sec. II, Essay iv following) all that is of philosophical interest in it as an application to the problem of Method of the particular blend of Platonic and Kantian philosophy which we have been learning more respectfully to associate with Coleridge's name. But besides this philosophical interest there is an historical and biographical interest attaching to the matter in its original setting. It is not perhaps likely that it was he who first proposed the new *Encyclopædia*, although credit is given to him for this by the publisher of the 1849 edition of the completed work. But he recognized more clearly than most of his contemporaries the profound changes that were taking place in the early years of the new century, not only in men's political institutions but in their whole outlook in science and philosophy. Alone almost in England he realized the issues that were at stake and the importance of permeating the new enterprise with the constructive aims of the Spiritual Realism of which he and his disciple J. H. Green were the leading exponents. It was this and the opportunity it offered to issue a counterblast to the destructive materialism, as he conceived it, of the French Encyclopædists that consoled him for having to put aside the "opus maximum" on which he was engaged for what otherwise would have seemed to him merely hiring himself out as a job writer and compiler. Even in the garbled form in which his Introduction has survived it is still possible to feel the breath of the inspiration with which it was first conceived and written, and which is enough to secure it a permanent place among his most characteristic philosophical utterances.

J. H. MUIRHEAD.

The Unitarian Movement in the Religious Life of England. I.: Its Contribution to Thought and Learning, 1700-1900. By H. McLACHLAN, M.A., D.D., F.R.Hist.S. (London: George Allen and Unwin Ltd. 1934. 1 p. 317. Price 10s. 6d.)

Principal McLachlan has collected a valuable mass of material showing how extensive has been the Unitarian contribution to thought and learning. Biblical scholarship, education, periodical literature, doctrine, philosophy, history, and biography, and belles-lettres are treated in this order.

The special characteristic of Unitarians has been their faith in man and their willingness to submit their beliefs to the test of reason. But reason cannot work if the results are prescribed beforehand. So Unitarians came to adopt the method of freedom from religious tests.

The first results of this freedom are seen in the section on Biblical scholarship. Till the middle of the nineteenth century Unitarians, like all Protestants, accepted the Bible as the ultimate authority in belief. But though they shared this pre-supposition, they were free from others, and this freedom made it possible for them to see the real significance of many facts in the Bible inadequately noticed and to anticipate many results now generally accepted. The details of Biblical scholarship given in this section will perhaps be of interest mainly to Biblical scholars, but the indirect light it throws on the working of the human mind are important. Readers of *PHILOSOPHY*, however, might be advised to leave this section to the last and to begin with the next one, that on education.

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This freedom is not negative, and the mind of man works badly unless it is trained. So Unitarians have been zealous in the cause of education. The section on education occupies a third of the book. Nonconformist academics are held in high esteem by competent students. They gave the best education to be had in the England of that time. There was a close connection between them and the Scottish universities, especially Glasgow, during the period called the Age of Moderatism. Members of the Church of England as well as Nonconformists attended them. They did not confine themselves to theological subjects; indeed they showed a special interest in science.

Many of the ministers educated at these academies kept schools, and these schools also provided an education above the average of the day. They experimented in new methods and taught a wider range of subjects. They showed that Catholics, Anglicans, Nonconformists, and Jews could be educated together. Disraeli was a pupil at one of them. One old student, on entering the House of Commons, said that he found more members who had been at Dr. Lant Carpenter's school than had been at Rugby.

Unitarians took a large part in the foundation of the modern universities, and supported them both by personal service and by generous donations.

The philosophic thinking of English Unitarians was dominated by John Locke till the time of James Martineau. They passed through a curious period of determinism, as may be seen in the works of Priestley. But in America William Ellery Channing had been led by Hutcheson and Price to a deeper view of human nature, and he was one of the influences which helped Martineau to break the hold of Locke.

The mention of a few names must suffice to show the quality of the men whose names find place in this book. John James Tayler, James Drummond, Estlin Carpenter, Philip Wicksteed were distinguished by their contributions to more than one branch of scholarship. In literature the names of Hazlitt, Lamb, Leigh Hunt, Walter Bagehot, Mrs. Gaskell, Stopford Brooke find a place; and if only for a time, Coleridge, R. H. Hutton, and Charles Dickens.

The Unitarian hymn-writers are omitted, and the Unitarian contribution to social progress is to be treated in a second volume by another writer.

RAYMOND V. HOLT.

Logic in Practice. By L. SUSAN STEBBING. (London: Methuen & Co., Ltd. 1934. Pp. x + 113. Price 2s. 6d.)

This excellent little book is the latest volume in the admirable series of monographs on Philosophy and Psychology published by Messrs. Methuen and edited by Professor Field. Like all the volumes in the series, it is intended for the ordinary reader, and meant to be of practical value to him in his thinking. Miss Stebbing believes that it is possible to get a habit of sound reasoning, and that a knowledge of logical principles and the practice of attending to them will help toward the formation of this habit. In accordance with her aim she keeps close to matters on which judgment has to be passed in the everyday life of a modern community, pointing out pitfalls, showing how easy it is to let oneself be deceived by plausible language.

In a book of this kind the problem is one of scale and exposition, and a happy choice of illustrative examples is half the battle. Miss Stebbing has done her work very well. The speeches of politicians (unfortunately) are a happy hunting-ground for the finding of illustrations of ambiguity, or indefiniteness, or of obscuring relevant issues; so do (on occasion) the debates of economists. Miss Stebbing has spared the philosophers. There are six

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chapters. In the first the writer explains what is meant by purposive thinking. In the next two she deals with form, and the various deductive forms of reasoning. The fourth deals with the ambiguities and vaguenesses to which words and statements are prone, and with the pitfalls involved in irrelevance. The last two deal with the estimation of evidence and the grounds of belief. Though Miss Stebbing does not intend the book as an introduction to logic, on account of her avoidance of technicalities, it should succeed in inducing in readers an interest in logic and logical problems; in this sense it makes a very good introduction to logic.

L. J. RUSSELL.

Scientific Organization in Seventeenth-Century France (1620-1680). By HARCOURT BROWN, M.A., Ph.D. (Baltimore: The Williams and Wilkins Company. 1934. Pp. 306.)

This is one of the American History of Science Society Publications. Although it is not on the book market in this country, it seems to me to be of such interest and value that attention should be called to it, and commendations offered. The writer must have expended an extraordinary amount of labour upon it; he has a very marked talent for research, and he can present the results in a lucid and attractive form. He traces the beginnings of investigation and conference on a multitude of questions in seventeenth-century France, and indicates its relations to the Royal Society in England. There was an unbounded curiosity, often an amazing credulity; much of the work would from the standpoint of science to-day appear altogether amateurish, although there were outstanding personalities of scientific genius, pioneers of the later developments. The one feature to which attention must especially be called is the cosmopolitanism of these searchers after truth; men of different nations gave one another generous help and encouragement in the pursuit of a common end. It is not for the thoroughly equipped, rigidly disciplined man of science of to-day to despise the day of small things. All who are interested in man's search after knowledge should read this volume, and should try from it to catch the spirit of these early enquirers. There was not in the enquiries definiteness of frontier, or strictness of method, but the most diverse investigations were followed under the comprehensive title of *philosophy*. I write this brief note as I want to share my pleasure with many others.

ALFRED E. GARVIE.

The Concept of a Limited God. A Study in the Philosophy of Personalism. By RANNIE BELLE BAKER, Ph.D. (Washington: Shenandoah Publishing House. 1934. Pp. xx + 234. Price \$3.)

The celebrated dilemma that insists that in view of the fact of evil, God must either be thought of as limited, or else not good, still exercises many minds. Dr. Baker has written a good account of the various philosophies that have chosen to meet the dilemma by admitting the concept of a limited God. She starts with the pluralists, including McTaggart, who, of course, appears as a pluralist rather than as a believer in a limited God, as McTaggart presented the odd paradox of a mind intensely interested in religion, which refused to admit the existence of any God. Other theories—those of Fechner, Renouvier, James, Mill, and Howison are noticed, and the authoress passes

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to Personalism. Here she groups some very diverse views, those of Rashdall, Brightman, McConnell, James Ward, and Tennant. Taken as a whole, the book is good, but at times one must judge that Dr. Baker is not fair to those she criticizes. For example, Dr. Rashdall is set down as belonging to those who ascribe "an irrational derogatory limit" to God, and is accused of being "apparently innocent of the Kantian epistemology," which suggests that Dr. Baker is much more "innocent" of the man she criticizes. Indeed, one gains the impression throughout that the strength of Dr. Baker's work is in analysis and description rather than in criticism. She is a convinced theist, and rightly judges that throughout the various types of thought that come under review, there is one main line of reasoning, which, despite many individual divergencies, leads towards a concept of God that gives reality alike to the world and to religion. Her own sympathies lie with the line of thought she expounds, and she has succeeded in bringing together in a synoptic study the chief issues involved in the notion of a limited God, and for this students of the philosophy of religion have reason to be grateful.

E. S. WATERHOUSE.

Outlines of Buddhism. A Historical Sketch. By Mrs. RHYS DAVIDS, D.Litt., M.A. (London: Methuen & Co. 1934. Pp. ix + 117. Price 5s.)

Indian Religion and Survival. A Study. By Mrs. RHYS DAVIDS, D.Litt., M.A. (London: George Allen & Unwin Ltd. 1934. Pp. 96. Price 3s. 6d.)

Of recent years, Mrs. Rhys Davids, in a series of books, has strenuously contended for a view of original Buddhism that, if accepted, must render all the usual expositions out of date. The present book sets forth in brief form what is more fully set forth in the larger books. It is a revolutionary conception of Buddhism. The "Four Noble Truths" are dated in the second and third centuries of Buddhism. The path or way, as a thing of eight parts, is also relegated to later times. Even karma, though in the sense of conduct it is prominent in Gotama's teaching, is relatively of small prominence, it is pointed out, in the Pitakas. The alleged atheism of Buddhism is explained as due to our Western ideas of God as the Great Other, being kept in mind when we are dealing with the Indian habit of thought that sees God rather in than beyond man. The No Soul doctrine is taken as a monkish misapprehension of the teaching that neither the mind nor the body was the self. The essential message of Gotama, as Mrs. Davids reconstructs it, is that man is a becoming rather than a being, and the purpose of this becoming was the working out of the God in man through many lives and many worlds. To imagine that such a becoming ignores God and the soul is to read these terms in a Western sense, not in an Indian. God has never been in Indian thought, the Wholly Other, nor has the self or soul been a property of man.

To some extent the proof of this depends upon a knowledge of the Pali words, which only an expert can possess. Mrs. Rhys Davids, as president of the Pali Text Society, has an authority here that cannot be questioned. She insists that the *bhū* words, words that is to say which come from the verb *bhū*, must be rendered by the verb become, not the verb to be, as the majority of translators have rendered them. But in another respect it is easier for the ordinary reader to grasp the force of the contention that Buddhism was not a break-away from Upanishadic teaching in the way it is often said to have been. It did not introduce a new moral code to India. It gave the accepted code a positive form and an immensely greater importance, not simply as a warning to evil-doers, but as a guide to right, a way of becoming,

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in man's quest for the uttermost. Buddhism must be understood in the light of its Indian background. Teaching which, on such matters as God and the self, flouted the most characteristic and innermost habits of Indian thought could not have sprung from an Indian mind, nor have made its appeal to Indian minds. Here one thinks the probability of Mrs. Rhys Davids' contentions is strong. The degeneration of Buddhism came in the later days when the monks read the teaching in terms of their own lives, much as the monastic theologians of a later day read into the Galilean gospel that which never entered the mind of Jesus, or even of St. Paul.

The present reviewer at least is convinced that in its main positions the representation that Mrs. Rhys Davids gives of original Buddhism is much more likely to be true than the traditional presentation. It is to be hoped that this little book will do something to convince students of the religions of the East that Buddhism had a better gospel to proclaim than the pessimism of the traditional dogmas, and that though it failed to maintain the original teaching, it was in itself a message that brought to man a realization of his own divine nature working upwards from the More to the Most.

In the other book, Mrs. Davids treats the same problem, that of the original teaching, from one particular aspect, that of survival. It thus forms a supplement to the general argument, giving in detail due consideration to a very important doctrine. If the view upheld above be true, it follows that to Gotama survival meant fresh opportunities of growth, of becoming, not the utter silence of the Void. Moreover, such survival meant a survivor. The reasons given for this must be read to be appreciated, but the whole argument is suggestive and convincing. There are indications that Mrs. Rhys Davids is establishing her point of view amongst many who are interested in the Comparative Study of Religion. At least, no one must now assume the traditional views of Buddhism without first facing and answering this powerful challenge.

E. S. WATERHOUSE.

Secret Ways of the Mind. By W. M. KRANEFELDT. Introduction by C. G. Jung. Translated from the German by Ralph M. Eaton. (London: Kegan Paul, Trench, Trübner & Co. 1934. Pp. xl + 188. Price 6s.)

The translator contributes a preface which is definitely pro-Jungian in tone, and this is followed by an introduction by Dr. Jung himself, in which he points out the contrasts between his own theories and those of Freud and Adler. He expounds the fact that each bases his psychology on one "instinct," sex and self-assertion respectively, and expresses the view that, inasmuch as there may be and probably are other instincts, other psychologies might be formulated which would fit the facts, or some of the facts, as well as do these. He then summarizes his own teleological point of view and his conception of the unpersonal unconscious from which each individual may be influenced to his detriment or advantage as the case may be.

The first chapter of the book proper is devoted to a short survey of the work of those (mostly French) authorities who were specially interested in hysteria and double personalities.

Next, attention is drawn to the theories of psychical traumata as the genesis of neurosis, especially of hysteria, and the therapeutic value and limitations of abreactions. The idea of the split in consciousness was extended to other forms of neurosis, the split being due to repression of unwelcome experiences. It was postulated as a result of experience that all such repressed

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material was sexual, and thus the fundamental theory of psychoanalysis was built up and the therapeutic procedure of free association evolved whereby the resistances of consciousness might be overcome. But, as the author points out, the analyst never divested himself of the shadow of his theory, so the assumption was tacit that anything resisted by consciousness was bound to be sexual. Next the development of the understanding of and importance of transference is discussed, and the Freudian theory of the interpretation of dreams and meaning of symbols is criticized as depending entirely on the phantasy which is the theory of psychoanalysis.

Adler's theory that neurosis rests on self-assertion, compensation for inferiority, and failure to adapt to reality on the basis of a practical failure in assertion and compensation is discussed shortly and not very adequately.

The theories of Jung which the author regards with favour are then studied. The conception of the collective unconscious by which Jung undoubtedly escapes the limitations of the Freudian and Adlerian hypotheses is explained; but for many of us the explanation leaves us with a feeling of diffuseness which can explain nothing. The compensatory action of the unconscious results in everything having a dual meaning and every impulse having a dual goal, since there can be no phenomenon without its compensatory opposite. Such a conception, of course, enlarges the potentialities of the human psyche, but detracts from its definition. For Jung the neurosis consists of the intersection of the opposites in a wrong way. Jung's classification into personality types according to the attitudes of extraversion and introversion, and the functions of thinking, feeling, intuition, and sensation, are discussed shortly, and then the author passes on to a consideration of the more difficult subject of transcendent function. The concept of the animus and anima, the masculine and feminine principles present in woman and man respectively, is dealt with at some length as explaining much in human conduct, and finally notice is given to the synthetic function of dreams.

The translator is to be congratulated in that, unlike so many translations from the German, the present book is clear and readable, but it is doubtful if this work really contributes much to our knowledge. There have been so many expositions and apologists of Freud, Jung, and Adler of recent years that a new work requires to have something very illuminating to say to be of real value, but we fail to find this novelty in the present volume.

R. G. GORDON.

The Principles of Logic. By C. A. MACE. (London: Longmans, Green & Co. 1933. Pp. xiii+388. Price 12s. 6d.)

In appraising Mr. Mace's book it is necessary to bear in mind the purpose which it is designed to serve. The author makes it clear in his preface that the book is meant to be genuinely introductory in character. It is written primarily for the use of those students who pursue the subject for only a single year. Its object is rather to indicate the nature of the questions which the logician endeavours to answer than to make any original contribution to the science.

Mr. Mace succeeds on the whole in keeping within the limits which he has set himself. His treatment of the subject is throughout expository rather than critical. He adopts as a starting-point the conception of logic as the study of the principles of correct thinking, going on to define it as a relatively complete, precise, generalized, and systematic account of the principles of inference. Various examples are given by him to show what a process of

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inference is. There follows a chapter on the nature of the proposition, which is defined as the objective factor in the judgment. We are warned against taking "factor" to mean "constituent" or "part," and thus supposing that propositions are mental. To the question, "What is the ultimate material of propositions?" which seems to me to be a meaningless question, the answer given is that it may be regarded "as consisting not of words, nor of purely mental stuff, but of the entities of which the actual world is composed" (p. 39). The ground for saying this is that "it is reasonable to suppose that the ultimate constituents of a proposition are also the ultimate constituents of a fact." I confess that I do not find the author's views of the nature of facts and their relationship to propositions wholly intelligible; but he disarms criticism of them by admitting that they are over-simplified, and that they raise difficulties with which it is beyond the scope of his book to deal.

The next six chapters (pp. 59-184) treat successively of the methods of combining simple into compound propositions, the traditional view of the forms of propositions, the traditional view of the principles of inference, and finally the generalized theory of deduction. The exposition is concise and efficient throughout. The only thing I find to regret in it is that the author did not more sharply separate the philosophical question of the analysis of general propositions, which belongs to a part of logic wholly uncovered by the definition of logic as a study of the principles of valid inference, from the formal question of the construction of logical truths, and their arrangement into a deductive system. And in discussing this second question, he might with advantage have shown in more detail how the principles of inference of the Aristotelian logic are contained in the class calculus, and the principles of the class calculus in the propositional calculus. He does, indeed, state that modern logic has generalized the traditional logic rather than replaced it, but he hardly gives the student sufficient indication of the way in which this has come about.

The remaining nine chapters are devoted to the subject of probability and induction. They contain a general account of scientific method, including statistical method, which is superior to anything else in the book. Mr. Mace is happy in his choice of examples and generous in providing them. And his account of actual scientific procedure is simple, straightforward, clear, and accurate. With the question of the validity of scientific procedure he deals less surely, though his exposition of Mill's and Johnson's methods is lucid and comprehensive enough. He seems on the whole to follow Keynes in supposing that probability is an unanalysable logical relation between propositions, and that the acceptance of the principle of limited independent variety affords the generalizations of science as high a probability as they need or deserve. This is not the place for an attack on Keynes's theory, misguided though I believe it to be. But I may venture here to reproach Mr. Mace for failing to consider the possibility that the attempt to justify induction rests on a mistake, on a failure, namely, to recognize that we are dealing here with a methodological principle, whose success in practice is the only warrant for it that can be, or needs to be, obtained. Surely this is the real discovery made by Hume.

In sum, my criticism of Mr. Mace on this point is not that he has fallen from his own high standard of clear exposition, or that he has given a false solution to a problem, but that he has posed a fictitious problem. And this is the type of criticism to which the very nature of his task lays him open all along. For logicians do not differ merely in respect of the solutions which they give to certain questions: they differ even more acutely in their conception of the questions which logic has to solve. Thus, those who view logic objectively

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as a body of tautologies will hardly be satisfied with a survey which represents us as beginning, in our pursuit of logical inquiries, "with concern for the private and personal difficulties we encounter in our attempts to think, and ending with the disinterested contemplation of the most general and the most abstract features in the nature of things." Yet to have done justice to every reputable view of logic would have greatly augmented the length and difficulty of a book which, for an introductory survey, is long and difficult enough already. And the author cannot fairly be blamed for confining himself to a conception of logic which is still the most fashionable in this country. Moreover, he does indicate the existence of alternative conceptions, and refers, at the end of every chapter, not only to the books in which his own type of view is further developed, but also to the works of dissentient authors. Indeed, the bibliography is one of the best features of a generally successful book.

A. J. AYER.

Indian Idealism. By SURENDRANATH DASGUPTA, M.A., Ph.D. (London: Cambridge University Press. 1933. Pp. xxiii + 206. Price 10s. 6d.)

The author of this work, Principal of the Sanskrit College, Calcutta, will be remembered from our detailed review, in Vol. VIII of *Philosophy*, of the second and latest volume of his monumental *History of Indian Philosophy*. The work before us contains with but few alterations the lectures delivered by him years ago as the Readership Lectures of the Patna University and is published as a "first attempt to put together some of the most important strands of Indian idealistic thought within a small compass."

The six chapters (conveniently divided into numbered sections) deal respectively with (I) Beginnings of Indian Philosophy, (II-III) Upanishadic Idealism, (IV-V) Buddhist Idealism, and (VI) The Vedānta and Kindred Forms of Idealism.

It goes without saying that for the most part the contents of the work read like an abstract from the author's *History*, yet the treatment of the subject-matter as well as the latter itself are not quite the same. We have here a more decided attempt at presenting the history of Indian philosophy as a connected whole, and side-looks to Western thinkers, purposely avoided in the *History*, are not wanting (Bradley, the English Nāgārjuna!). The principal Upanishads are individually described, not synthetically as in the *History*. This latter work being still in progress, a few systems not found in its published volumes had to be taken into account. Of these the ancient Vaiṣṇavite philosophy called Pāñcarātra, as represented by the Ahirbudhnyasamhitā, has thus for the first time found a place in a history of philosophy. Special importance has been rightly attached to it, because it is the systematic elaboration of the philosophy of the Bhagavadgītā. Being "quite uninfluenced by the later philosophical speculations," this "best reconciliation of the apparently irreconcilable strands of Upanishadic thought" is dealt with, after the Gītā as the first attempt of that kind, in the second chapter on Upanishadic idealism, and is tentatively called the *idealism of dynamic pantheism*, a somewhat queer label, indeed, which, however, well indicates the two tendencies synthesized in this system.

That Buddhist idealism has been given considerably more room than the one allotted to the idealistic systems of the Brahmins will surprise no one who knows the great indebtedness of the latter to the former. The Buddhists are the founders of scientific philosophy in India. The philosophy of the Buddha himself is described by our author according to the scholastic view

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(Thēravāda), i.e. as *pluralist phenomenism*, at the end of the second chapter on Upanishadic idealism, which is indeed its proper place. But just for the latter reason a few hints would have been desirable as to those uneffaced vestiges in the Buddhist scripture which show the Buddha in much closer contact with Upanishadic idealism than the scholiasts, and to which long ago the writer of these lines and in recent years Mrs. Rhys Davids have called attention.

The last chapter has become too short. Tantrik idealism, e.g., has been dealt with in a rather too sketchy way, as also the Kashmirian Trika philosophy with its superb literature cannot be sufficiently explained on two pages only; and the little section (29) of less than one page on the Ekajīva-vāda is not proportional to the interest that attaches to the only systematic attempt at *solipsism* made in India.

It is a pity that the friends of the author mentioned in the Preface who have seen the work through the press are all of them Indians. An Englishman could have helped to improve the language and would have pointed out not a few passages and terms (such as *viksepa-sakti*, p. 193) which are not likely to be understood by the general Western reader. We have also found some misprints and inconsistencies¹ which must disappear in a future edition. But this is not meant as a discouragement. Every reader, we feel sure, will draw profit from this highly interesting work, the use of which is facilitated by an excellent summary covering seventeen pages.

F. OTTO SCHRADER.

Religion and the Sciences of Life. By PROFESSOR WILLIAM McDUGALL, F.R.S.
(London: Methuen & Co., Ltd. 1934. Pp. xiii + 263. Price 8s. 6d. net.)

This volume consists of miscellaneous essays and addresses of which most have appeared elsewhere and which are now brought together. They are of uneven quality and varying interest, although readers will differ as to which are the more interesting and the more valuable; and most are rather sketchy. It appears that Professor McDougall (1) is very much opposed to mechanism and materialism, this opposition resolving itself into a condemnation of physical science in favour of his own psycho-biological science, (2) believes in the idea of native endowment and in differences in quality of stock, (3) is devoted to the eugenic ideal of quality of stock in a people, (4) is very much concerned about the failure of the best stocks to reproduce themselves, and (5) is a believer in the need and efficacy of family allowances to induce the best types, at present handicapped in various ways, to propagate the race. The ideas do not always seem consistent. If there is an increasingly powerful biological opinion against mechanism and materialism, why the urgency of McDougall's writing; and if it is so, why speak of the spread of materialism and its increasing danger to civilization? The Burmese, a happy, gentle, and tolerant people, are criticized because of their intellectual sloth and their lack of the rudiments of scientific culture; but science is also held to be the source of the world's grave disorder and chaos. The development of mechanical science has led to an enormous increase in the world's population and several of the essays are dominated by the spectre of over-population; yet science has intensified economic comfort. Over-population, manifested in a life at the bare subsistence level, is a cause of the degradation of civilization; economic well-being, as in America, is a cause of racial decay; over-population, as in

¹ *Bākyapadiya* (p. 196) is an ugly disfiguration of *Vākyapadiya*, and the constant use (pp. 88 fl.) of Pali *saṃkhāra* among Sanskrit terms cannot be justified. And is not *īśatā* (pp. 86 fl.) rather "thusness" (*īśā-bhāva*) than "thatness"?

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Japan, is not a cause of failure; native or racial qualities are the causes of the rise or collapse of culture. Professor McDougall, in view of his awareness of the anomalies in modern civilization and of the part played by the economic factor, might have been expected to grasp how feeble is the idea of family allowances in face of the gravity of the problem and how little his own opposition to mechanical science bears on the issue. Although his discussion contributes little to advance a general solution, he is at least deserving of praise for attending to a type of problem in which unfortunately far too few contemporary thinkers are interested.

B. M. LAING.

On the Nature and Grounds of Religious Belief. By J. L. Stocks. (Riddell Memorial Lectures in the University of Durham.) (London: Oxford University Press. 1934. Pp. 47. Price 2s. 6d.)

These acute and suggestive lectures treat of (i) the kinds of belief, (ii) religious belief, and (iii) conflicts of belief. "The specifically religious grounds of religious belief (which are obviously the real grounds)" they do not pretend to consider. There are, Professor Stocks argues, three general kinds of belief, viz. those which concern Matter of Fact (including Science, or generalized fact), Mathematics and Metaphysics. To these "Theoretical beliefs" are added the "Aesthetic and Practical."

The belief that "God exists," Professor Stocks argues, is quite unique, since it simulates Matter of Fact in asserting existence, but is unlike it in defying verification. Furthermore, it is not evident *a priori*; nor can it be assimilated to assertions of value unless the value asserted be "of a very peculiar kind."

Professor Stocks's main contention is that beliefs integral to religion (such as that Mind orders all things, and that "the all-ruling mind is essentially all-embracing love") are generically philosophical, or, in the terms of his distinction between Total and Partial Assertions, are such as to involve Total Assertions about the world. Two consequences of this are (i) that non-religious philosophers are acutely hostile to religion because it involves a competing philosophy, and (ii) that religious beliefs cannot possibly conflict with scientific beliefs however well-attested, since these latter are Partial and not Total. Professor Stocks here observes that, "Aggression for aggression, the invasion of the scientific sphere by the spiritualist is undoubtedly the more unwarranted and the more harmful in its results." I do not see, however, that the one aggression is, on Professor Stocks's grounds, more or less warranted than the other; and one's estimate of the harm effected by either manifestly follows entirely from one's "Total Beliefs." It all depends upon what one takes to be the "good for man."

To venture but two suggestions, it seems to me (i) that the beliefs integral to religion may not be without their own *relevant* verification, and thus may not be of just the same order as, let us say, the propositions composing the philosophy of Leibniz. Very probably Professor Stocks would not deny this. And (ii), it seems to me that in showing the conflict between the religious attitude of "all-embracing love" and the moralistic attitude Professor Stocks underestimates the central and fundamental importance in theology of the *wrath* of God.

RALPH E. STEDMAN.

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Moscow Dialogues: Discussions on Red Philosophy. By JULIUS HECKER, Ph.D.
(London: Chapman & Hall. 1933. Pp. xvi + 285. Price 8s. 6d.)

It may be too early to say that Lenin was the greatest European of the first third of this century, or that the Russian Revolution was a bigger historical event than the European War that provided its opportunity; but both these statements may very well be true. Therefore, we all want to understand these matters if we can; and if there is an intelligible philosophy behind them, as the author assures us and as Professors Macmurray and Laski as well as Mrs. Beatrice Webb say on the jacket, we think with some excitement of a lucid presentation of it.

It may fairly be claimed, I think, that Dr. Hecker has earned our gratitude both for his conception and for his execution of his task. True, these dialogues do not contain any marked dramatic quality. Nevertheless, the device of representing an assorted group of American tourists as having a series of discussions on red philosophy with Tovarishch (Comrade) Socratov allows the theme to be developed with rapid changes of perspective. Indeed, the "humanist" (in the American sense of that word) frequently makes intelligent interruptions; the banker and the senator at least represent a significant point of view; the rather-more-than-almost-persuaded "professor" (whom America later treats in a Bolshevik way) relieves Socratov from some of his heavier stuff; the reformist should plainly be present; and if the unintentional clowning of the rotarian is not very skilfully done, it was perhaps wise to have a clown somewhere. Again, the book is well arranged. It begins historically, expounds its philosophy in the middle and applies it at the end. Moreover, the several dialogues (there are twenty of them) are compact and orderly, making subsequent reference easy.

Indeed, if the "understanding" of a "philosophy" is possible when the philosophy itself is unclear, we may well agree with Professor Macmurray in his introduction that this book does help us to "understand." The book convinces me, however, that red philosophy itself is not an intelligible body of doctrine; and I should say that it demonstrated the pallor of red philosophy.

The central conception of "dialectical materialism" as presented by Dr. Hecker appears to be neither dialectical nor materialistic in any rigorous sense. Its "dialectics" appears to consist of deplorably empty talk about the "negation of negations" and the like without any serious attempt to show what *must* "negate" what, or how it must do it. The workers, for example, are supposed to "negate" the bourgeoisie (I suppose with machine guns) for reasons which, if sound, would equally prove that the unemployed must "negate" the workers. Again, this "dialectic" cheerfully borrows the very worst parts of Hegel's alleged logic. When, for example, the Senator remarks that capitalism has *not* increased the misery of the workers, Tovarishch Socratov invokes the "dialectical categories of the unexpected and the accidental" (p. 104)—although he also says some other things that are more to the purpose. And what should be thought of the flabby logic that infers (p. 96) that laws of movement must themselves move?

Similarly the alleged "materialism" seems to mean almost anything the red philosophers may happen to want. Apparently it must be a "realism" of some sort and must "put Hegelianism on its feet instead of on its head" by recollecting that consciousness must have developed from a prior unconsciousness. Engels, however, in explaining the way in which Hegel should be made to occupy a normal human posture construed the necessary "materialism" *either* as a representative theory *or* as a theory of neutral monism without troubling to choose between them (p. 71). It is scarcely pretended that Lenin's treatise against the wicked communists who flirted with the ideas of

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Mach and of Avenarius was more than a political move under a philosophical flag; and Tovarishch Socratov includes just as much "subjectivism" in his "materialism" as he wants by the puerile device of saying that any discontinuity in Nature (such as the natural gaps or jumps according to the Quantum Theory") introduces a "subjective element" into Nature (p. 195). We learn indeed that a wretched man called Deborin renounced his "Menshevik idealism" because he was outvoted at a great conference in 1930, and "publicly confessed his former Menshevik errors" like an unusually docile Church Father at an ecumenical council; and that, in 1929, "mechanistic" materialism was similarly voted down. Materialism must therefore avoid the Scylla of idealism and the Charybdis of mechanism; but precise sailing directions are almost wholly to seek.

It is scarcely surprising, therefore, that the applications of this "philosophy" to religion, morals, or art are quite nebulous. Regarding religion (perhaps because a tame bishop from the Church of England was present), Tovarishch Socratov is rather reticent and even humble. He disclaims final views (p. 200) and even says that "we have not stopped to think why we do the things that seem so unusual to you." His simple opinion seems to be that Russia's immediate goal is best served by remembering the way in which Christianity in the past has so often been used as an anti-proletarian bludgeon. Regarding ethics, he appears to think that "in a classless society . . . a human (i.e. "humanistic") morality will at last be possible" (p. 216), but that, at present, all conduct should be subordinate to the class dominion of the workers. When he comes to art, however, he lays emphasis, somewhat surprisingly, on "the world-wide outlook of human brotherhood" although he remarks, quite correctly, that "proletarian music" may be very good music although intensely class-expressive (just as, we might say, Christian art might be very good art although intensely pious). In short, Socratov is sitting on a woolly fence, taking comfort from the wool. He does not try to tell us, *e.g.* whether a judge should decide against the evidence if a conviction seemed politically expedient; or, if not, why not; and some of his comments upon other moralists are amazingly weak. Thus he objects to the "greatest happiness" principle on the ground that it presupposes ineradicable misery (p. 217), and in proof of his optimism asserts that poverty, disease, and ignorance can be cured. These, however, were precisely the examples of *removable* evils that Mill gave in the second chapter of his *Utilitarianism*.

Dr. Hecker is to be congratulated on his command of the English language (if not of its spelling). One of his few slips is the statement (p. 73) that Feuerbach, Marx, and Engels were *revolting* pupils of Hegel.

JOHN LAIRD.

A Bibliography of Aesthetics and of the Philosophy of the Fine Arts from 1900 to 1932. Compiled and edited by WILLIAM A. HAMMOND, Professor of Philosophy, emeritus, in Cornell University. Revised and enlarged edition. (New York: Longmans, Green & Co. 1934. Pp. x + 205.)

It was a red-letter day for aesthetics when the American Philosophical Association, as the first volume in a comprehensive bibliography of modern philosophy, decided to publish this magnificent and unique survey of the main trend of aesthetic speculation between 1900 and 1932. Their editor, Mr. Hammond, has done for the modern period what Gayley and Scott did for the period reaching from classical antiquity to the nineteenth century,

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and every philosophical library should find a place on its shelves for the fruit of his practically impeccable scholarship. To my knowledge, no substitute or equivalent exists; at present it is only by wading through the annual bibliographical supplement of the *Zeitschrift für Ästhetik und allgemeine Kunstwissenschaft*—a periodical to which Mr. Hammond pays a well-earned tribute—that the student can hope to trace the meanderings of aesthetic thought through recent times.

It includes within its scope almost every type of literary production in which aesthetic theories are usually discussed, passing from periodicals, historical writings, systematic and general works, to detailed studies of the individual arts, of their origins, of the varieties of artistic style, and finally to the broader question of the peculiar relationship between art and psychology, morality, and religion. There is at this point no really serious omission or fault of arrangement; but one chapter might, perhaps, have been given to the literature of the minor or applied arts, and the problem of the child's aesthetic experience would have found an appropriate place in the pages devoted to the origins of art and its manifestations among primitive peoples.

But even the most thorough and conscientious scholarship is liable to error; and, in the hope that an amended second edition of this invaluable work will soon be demanded, I shall endeavour to indicate one or two writers whose names or publications do not now appear on the list so carefully compiled by Mr. Hammond. No scholar could fail to detect some striking lacunae. It is surprising, for instance, to find no mention of S. Alexander's *Space, Time, and Deity*, Vol. II, or of his important pamphlets on *Art and the Material* and *Art and Nature*, under the heading of general theory; it was, of course, a distinct pity that his *Beauty and Other Forms of Value* was too late for inclusion in this survey. Under the same rubric should have come J. Sully's article on "Aesthetics" in the eleventh edition of *Encyclopaedia Britannica*, and Herbert Read's Essay on *The Meaning of Art*. In the historical section it was unfortunate that the *Essai sur les tendances critiques et scientifiques de l'esthétique allemande contemporaine*, published by M. Bites-Palevich in 1926, found no mention, as it contains a very elaborate account of contemporary German speculation.

G. Baldwin Brown's *The Art of the Cave Dweller*, unrivalled among English studies of the origins of art, is curiously ignored, and M. C. Burkitt's interesting chapters in *The Old Stone Age* share a similar fate. Our author is silent about G. I. Raymond's application of his first principles to music, poetry, and the plastic arts, about Roger Fry's recent work on *The Arts of Painting and Sculpture*, about S. Freud's *Introductory Lectures on Psycho-analysis*—of capital importance to the psycho-analytic hypothesis—about P. A. Lascaris on *L'Éducation esthétique de l'Enfant*, about C. H. Reilly on *The Theory and Practice of Architecture*, and about both *The Economic Laws of Art Production* and *The Place of Economy in Art*, two brief works in which Sir H. Llewellyn Smith discusses certain economic and social factors in the historical development of the arts.

But these are minor blemishes on by far the best guide to aesthetic literature in modern times, and if the subsequent volumes published in this series live up to the standard set by the first, the American Philosophical Association will be able to congratulate itself on a very considerable service to philosophy.

LISTOWEL.

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Carlyle and German Thought: 1819-1834. By C. F. HARROLD. (New Haven: Yale University Press. London: Oxford University Press, Humphrey Milford. 1934. Pp. xii + 346. 2 dollars 50 cents.)

Carlyle and German Thought: 1819-1834, by Ch. F. Harrold, is the subject of Vol. LXXXII of the *Yale Studies in English*. The 240 pages of the text of this treatise are fully supported by about 80 pages of valuable notes, and there is added also a useful appendix by W. Leopold on *Carlyle's Handbooks on the History of German Literature*. The subject is one that has been touched upon by most writers on Carlyle and dealt with in parts, especially by Carré, Cazamian, Kraeger, Hensel, Fehr, Baumgarten, Hagberg, Wellek, Lehmann, Storrs, and Leopold. But while this is "the first comprehensive study of the problem, that hitherto has only received fragmentary and conjectural treatment," it will be admitted that the author's handling of the "wide-weltering" mass of facts, ideas, opinions, and conclusions is so complete, so well documented, scholarly, balanced, and convincing, that it bids fair to constitute also the last word on the problem. Above all, the book is distinguished by a *Gründlichkeit* and *Vollständigkeit* that remind one of the very best type of German scholarship. At the same time, it is eminently readable and stimulating from beginning to end. It has been the avowed aim of the author to collect the conclusions of all valuable previous studies touching on the subject, to supply original additional information on neglected or debatable points, and to attempt a critical and synthetic interpretation on the complex problem as a whole. Among German thinkers that were understood to have had a more or less decisive influence on Carlyle during the formative period of his thought, we now recognize that the following—approximately in the order of their significance for Carlyle—were the most important: Fichte, Goethe, Novalis, Kant, Schelling, Richter, Schlegel, Schiller, Jacobi, Werner. Lessing and Korder do not come into the picture. As a number of these thinkers have influenced one another, and as they form more or less part of one great movement of German thought, it has been a task of supreme delicacy, complexity, and difficulty to separate out, as far as possible, their individual contribution to Carlyle's development. Moreover, Carlyle was temperamentally incapable of taking over the system of another thinker, or any organic part of it. He was essentially "not a philosopher, but a man of letters," unsystematic himself, working by intuition, an eclectic, "a wanderer among ideas, seeking here and there an echo of his own convictions." "He handled philosophical problems with the negligence of a gifted amateur." He was "indifferent to the origin and extent of the influences upon him." As Cazamian has put it: "His originality lies not so much in the discovery of ideas, as in their transposition and interpretation." By way of illustration of the fact that "Carlyle in his handling of German ideas touched nothing that he did not alter," the author points to Kant's distinction of Understanding and Reason, his conception of Space and Time, Fichte's Divine Idea, Goethe's Gospel of Work, Sanctuary of Sorrow, the Reverences, the Duty of Silence, Renunciation, the Vesture of the Godhead. It is one of the great merits of his book that in every instance the extent and direction of Carlyle's departure from his "sources" has been indicated. Under these circumstances, one is not surprised to learn that the influence of German thought on Carlyle has been much exaggerated. It is significant that many of Carlyle's "borrowings" were taken not from systematic works, but from more or less recondite passages of books of an aphoristic character. From these he would pick a striking and graphic phrase, that seemed to confirm his own ideas or to give relief to them. In this way even Goethe, certainly one of the most decisive and lasting influences on him, was for

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him "not a point of departure, but a *point d'arrivée*. Carlyle, in many cases, was prepared by his own development for the reception of these German ideas, in which his own views found confirmation. On the whole, then, the author has succeeded in vindicating Carlyle's originality, and he has done so by stressing the dominating influence of his parents, his early environment and puritan upbringing, which persisted as an indelible character of his mind, and by its ascetic tone coloured every idea and the sense of every significant phrase that he gathered from his voluminous reading and transferred to his own argument. His acquaintance with some of the German authorities was very limited and fragmentary. His knowledge of Kant was largely at second-hand, through Coleridge and Jacobi. There is "no evidence that he ever understood or tried to understand Kant's *Critique*." With Fichte and Schelling he seems to have established closer contact. Among the more important chapters of the book which follow the general introduction, "Carlyle's Universe," "Understanding, Reason, Phantasy," "Carlyle and Heroes," "Carlyle and the Problem of Life," we should like to single out "Carlyle and History" for special commendation. It should also be pointed out that the author had in recent years already proved himself a Carlyle scholar of note by his essays on *Carlyle and Kant*, *Carlyle and Novalis*, *The Mystical Element in Carlyle* and *Carlyle's General Method in the French Revolution*.

OTTO SCHLAPP.

The Philosophy of Bhedābheda. By P. N. SRINIVASACHARI, M.A. (Madras: Srinivasa Varadachari & Co. 1934. Pp. xvi + 366. Price Rs. 5; 7s. 6d.)

Bhedābheda, a compound of a positive and negative, and meaning unity and diversity (*lit.* breaking-up and its contradictory) was the centre-point of a mediaeval Hindu philosopher, Bhāskārā, who is, it would appear, entirely forgotten save in his writings. Neither the author, a Madras professor of philosophy, nor Professor Hiriya (cf. *Philosophy*, Vol. VIII, No. 32), who writes a foreword, enlightens us about the man by a single line. This is not encouraging for the reader of to-day, who is getting tired of losing the man in a system of ideas. But he will do well to persevere and study with sympathy and appreciation the ways in which early Indian culture wrestled with the problem involved in Immanence: the mystery of the one and the many in man's inherent Godhead, and the long way of making a potential into an actual unity. The author seeks to instruct his youthful fellow countrymen by modern parallels in Western thought. But in both those he quotes and in his own Bhāskārā a solution of the problem does not lie. All of these are too much under the heavy mortmain of Being and Appearance, or, to cite him, "pan-illusoriness." A great son of India did show the way to more light. Will not Mr. Srinivasachari help dig up the forgotten solution to *Bhedābheda* suggested by the Sākyamuni?

C. A. F. RHYS DAVIDS.

The Secret Lore of India and the One Perfect Life for All, being a few Main Passages from the Upanishads. By W. M. TEAPE, B.D. (Cambridge: W. Heffer & Sons, Ltd. 1932. Pp. xvii + 345.)

It is well to see men who, apart from urgent convictions, are professionally pledged to uphold ecclesiastical Christianity, confessing, in a spirit that goes

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beyond denominationalism, to the strong appeal they find in the Upanishadic teaching. At least in that of the few reckoned earliest, or "pre-Buddhistic." They help to spread the wider religious view that "God . . . at sundry times and in divers manners *hath spoken*." They, more in a way than the creedless man, help to break the bars of sect. They show a long broad growth where many see only a thin ray of intense light in prevailing darkness.

In more specific comment, I commend the way in which Mr. Teape sees, not an abstract self, but a Perfect Man felt after in the Upanishads. But (1) I disagree with the ignoring how, in them, the growth, the becoming (*bhū* is this, *not* existing) of him is also felt after. Dr. Hume's renderings show this, as Deussen's do not (he was too prejudiced), yet the former is blind to the inference to be drawn therefrom. (2) I deprecate the ignoring of Max Müller, without whose pioneer work this book would not have come to be written. (3) I strongly deprecate the fitness of "secret lore" for the Upanishads. They were academic "classes" in religion, among other classes, given by professional teachers to *both sexes* (cf. *Ait.* 5, 1, 4ff) for a fee, and suitable, almost entirely, for the youth of the "higher" classes. They were not "Greek mysteries," and their broad, stable, *if unfinished*, religious value lies in the fact that they, as a gospel of Immanence, were collectively a lofty creed for Everyman.

C. A. F. RHYS DAVIDS.

Yoga and Western Psychology; a Comparison. By GERALDINE COSTER.
(London: Oxford University Press, Humphrey Milford. 1934. Pp. 248.
Price 5s.)

The author has followed up her earlier work, *Psycho-analysis for Normal People*, by this spirited attempt to enlarge her field historically, in which she places the modern art of psycho-analysis beside the ancient Yoga-therapy of India. Herein she judges that the former has as yet only got so far as to achieve what the latter seeks to achieve merely in its rudiments. In its advanced stages, Indian Yoga proposes to take the initiate to a new world of development, where as yet our psychology has nothing to offer. This is a very stimulating challenge to us, and one which I hope may be taken up. It will necessitate a more thoroughgoing exploration of the nature of Yoga at different periods (for it has its history) than her short treatise is able to give. Yet even this might have profited by references to the *editio princeps* of the Yoga Sūtras by Professor James Woods. Her own knowledge of these suggests knowledge at second-hand, derived from M. N. Dvivedi's work. Anyway, we get a somewhat over-Westernized idea of what a good many terms may really have meant to the Indian mind. For instance, the word "will." Ancient India never had so fit and strong a term as this. She had *kāma* (*karma* is, of course, not meant). But when the Yoga Sūtras were serially compiled—about 300 B.C.—this term, which at the best meant "desire," *i.e.* an emotional term with will and thought as co-efficients, had become worsened into meaning *only sensuous* desire. But Miss Coster equates, for Yoga, our "will" with *ātmā*, or "self." Fundamentally I hold she is right, but I question if Indian Yoga would ever have admitted it. The Yoga Sūtras have much to say about desire, and it is always, as in ecclesiastical Buddhism from about the same date, in a bad sense. But that the whole of Yoga is virtually a discipline and development of will, without an adequate word for will, is not clearly brought out. There is discussion of the word in its modern usage and misuse, with reference to Coué. Now Coué, as I have said else-

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where (*The Will to Peace*, 1923), in opposing will to imagination, overlooks the fact that to be imagining—indeed, to be mentally active—is to be willing, *i.e.* conative. But the author has here different strictures to make. And as to the word “self”—that she makes the Sūtras condemn “self-esteem” as an illusion is to write so “occidentally”—seeing in “self” only our worst self, when for India it meant not only “spirit” but “Holy Spirit”—that we feel a much more careful handling of the text is required. An Index, too, is a need not here supplied.

C. A. F. RHYS DAVIDS.

A New Approach to the Vedas. An Essay in Translation and Exegesis. By ANANDA COOMARASWAMY. (London: Luzac & Co. 1933. Pp. ix + 116. Price 5s.)

This brochure is intended to be a sample of reform in Vedic translation and exegesis. It contains much general and specific complaint, that work herein is too mainly philological, “too little humane.” In other words, translators have shown insufficient knowledge of, or at least sympathy with, parallel “resources” such as are brought to bear on Christian exegesis and translation.

I am not likely, with experience in an adjacent field, to lack appreciation of such a will in reform. I trust the author may go on to expand this sample into a more inclusive treatise. I will herewith make three suggestions as to it. Let him do away with the peppering of his text with capitals to general terms. They are irritating, being no more needed than they are in the Vedic quotations, where, of course, they don't occur. Let him print his Notes (pp. 77–116) in a type not smaller than that of text and exegesis. It is mainly these that scholars will wish to consult. And scholars have hard-worked and ageing eyesight. So handicapped, I have not gone in detail into them. But I have so far failed to note that, in one or the other of his parallel cultures, he writes with a sense of time-perspective. But it is just this perspective, this historic sense that gives real value to the study of ancient world-views. That sense is the Man measuring the Man as growing in a better or a worse. By such we ourselves grow.

I would add that even in a brochure an Index would have been most useful.

C. A. F. RHYS DAVIDS.

The Ethical Movement in Great Britain: a Documentary History. By G. SPILLER. (London: The Farleigh Press. 1934. Pp. 195. Price 4s.)

This is a very interesting account of the beginnings of the Ethical Movement in this country by one who has been largely absorbed in it. The movement began in America, chiefly under the influence of Dr. F. Adler; and it is chiefly associated in this country with the names of Dr. Coit and his daughter Virginia; but Edward Caird, Henry Sidgwick, Professor Muirhead, and some others have helped to give it a firm hold in England. In its early beginnings it was pretty strongly opposed to the ideas of God and Immortality; but latterly it has been a good deal influenced by psychical research, and has thus lost the somewhat negative attitude towards other forms of religion that was at first characteristic of it. I believe that this change has greatly enhanced its influence for good. Most of the particulars that are recorded in this History

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are probably familiar to many readers of *Philosophy*; but, so far as I can judge, it is a thoroughly reliable account of the whole movement up to date, and it may consequently be expected to retain a permanent value.

J. S. MACKENZIE.

Filosofi del novecento. Appendice a La Filosofia Contemporanea. By GUIDO DE RUGGIERO. (Bari: Laterza & Figli, 1934. Pp. vii + 297. Price 20 lire.)

The volume consists of seventeen articles contributed during the past six years to *La Critica* under the general title of "Notes on the Latest Philosophy of Europe and America," and now offered in collection as a supplement to the author's remarkable survey of philosophy since about 1850, *La Filosofia Contemporanea* (1912; English translation, *Modern Philosophy*, Allen & Unwin). Subsequent editions of the latter work have brought up to date only the section dealing with Italian thought. The present volume carries forward the account of the remaining movements. Behind it lies the same wide and indefatigable reading, and in it the same elevation of concise exposition to luminous interpretation, the same penetrating dialectic, and the same delightful style, strewn with beauties which are never adventitious to the theme. I know of no living historian of philosophy who so steadfastly elicits the major metaphysical issues from the frequent verbiage of our long lucubrations, who in his unsparing searchingness ignores so superbly the mere paraphernalia of the search and presents with perfect directness the relevant material to be judged and the canons by which the judgment may be ruled. Since for the philosopher the history of philosophy can never be merely history, our only justification for spending so much time on it in our curricula being that it is an incomparable propaedeutic to personal philosophizing, and since Professor de Ruggiero writes constantly from this point of view, and writes with genuine distinction, I am sorry that his translated work is not more widely read here, and that his other volumes have not taken their place in English alongside it. In selecting works for translation we seem to prefer obvious to concealed erudition, out-of-the-way thoroughness to selective insight. Perhaps brilliance loses its lustre in the conversion to another tongue; heaviness survives the change.

The book opens with three chapters on British realism, which deal chiefly with Alexander, Whitehead, Broad, and Lloyd Morgan. So convinced an idealist as Professor de Ruggiero cannot be expected to think well of this line of thought, but he makes the remark that it would be "wrong to judge realism simply by its conclusions," and admits that realism has had the historical value of contributing to the critical revision of idealism which some idealists are now undertaking. The generic error of realism consists in failing to do justice to those very features of the subject that make it a subject: Alexander's reduction of the relation of subject and object to one of "comprencence," and Whitehead's dilution of the subject into a "percipient object" (with all the stress on the noun) are instances, instances which reveal the naturalism logically involved (whether or no also intended is beside the point) in realism; and the insuperable objection to naturalism is that it cuts instead of solves—cuts because its principle precludes solving—the problem of knowledge. The author finds a growing consciousness of this weakness and a consequent tendency in an idealistic direction in Lloyd Morgan and in the later work of Whitehead, and observes that Alexander's analogical assimilation, however unwarranted it may be, of the relation of each emergent order and the order

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from which it emerges to the relation between mind and body is a reversion of the standpoint of realism. I am not sure that this observation is right, for the real—and realistic—point of the analogy as I understand it is to insist on the temporal priority of the physical and thus to preclude the very possibility of mind being the creative spring. The weakness of the analogy lies, of course, in its conceiving mind as simply that which *supervenes* on the body, the significance of its retroaction on both this and on the suborganic and of its curious activity of *knowing* these being left unexplored. The effort to seize the implications of the undisputed superiority of mind is the characteristic mark of idealism, and of this in Britain at the present time the author detects very little: he devotes one article to Sir James Baillie and Mr. Collingwood, regretting the former's withdrawal from metaphysical construction and welcoming the latter as representing a younger and newly conceived idealism. A casual reference to the "great success of Bergson and Croce in England" is, I fear, a misinterpretation of our frequent references to these two thinkers, whose influence among us has been small.

Of the present state of philosophy in Germany Professor de Ruggiero has a poor opinion. He clearly would not countenance the supposition that to be up to date one must keep pace with the endless publications from Leipzig, Berlin, Munich, and Heidelberg. Out of the army of writers he has, one infers, little ground for making any choice at all, but selects the historicizing group of Dilthey, Troeltsch and Spengler, and the Phenomenologists. His comments on the latter are straight and strong. "I confess that I have several times tried to approach with an open mind the philosophy of Husserl, and on each occasion have come away with a feeling of impatience and irritation. . . . To be forced to move through a maze of formulas and pierce the abstruseness of a language which, especially in Heidegger, is far more difficult than that of Hegel, and get at the end of it only irrelevance and banality, is the worst misfortune that can happen to a student who hates to waste or misspend his time." The confession is interesting from so inured a reader, and may serve to encourage other readers to equal candour. It is not merely the "implacable finality" and consequent verbalism that Professor de Ruggiero cannot abide, but the triviality of the principle itself of Phenomenology. When you have abstracted from both the subjective conditions of knowledge and its reference to reality, he asks, what is there left that is worth thinking about? "Most disconcerting of all is the fact that Husserl's doctrine, or rather his method, is in its very principle out of the reach of criticism, and can only be refuted indirectly by the barrenness of its results. Imagine a melancholiac who shuts himself up in his room and claims to form an idea of the world from the shadows of things that fall on his wall. The example has some analogy with Plato's man in the cave, but with this difference, that the latter has no alternative, whereas our melancholiac has shut himself up of his own free will, with the claim to see better thereby, and is, moreover, so fully aware of the nature of his procedure that he is on his guard against confusing the shadows with the things, and gives his science the name that suits it, namely, the science of shadows. His position is irrefutable. There is nothing against it except the wisdom of the adage, *The ass to his straw (chi si contenta gode)*." The picture seems to me to be just. To trace out the purely logical affiliations of concepts is too exhausting to be called a game, but it is also too aimless and endless to deserve to be called philosophy.

Santayana (wrongly described as a naturalized Englishman) and Dewey are the only Americans brought under review. Three French thinkers are given a chapter each—Hamelin, Meyerson, and Bergson in his latest phase. Many will welcome the inclusion of Hamelin, of posthumous fame, whose

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analysis of the categories is considered by Professor de Ruggiero to be one of the best since Kant.

The author's versatility is illustrated by three pregnant chapters on the philosophical bearings of recent science. The theory of relativity is driving physicists away from materialism, forcing them to reflect on the first pre-suppositions of scientific method, and convincing them that this consists in establishing constant relations within a flux whose actuality has meaning only in terms of experiencing mind. In the sphere of atomic physics the controversies of continuity versus discontinuity and of determinism versus indeterminism are of interest to the philosopher. One thing is clear, namely, that the atom, in ceasing to be a mere hypothesis, has ceased to be really atomic, since its structure is now seen to be complex and its behaviour to a large degree to be a function of its field. All which leads the physicist to a more plastic conception of inanimate nature, a nature of more varied possibilities, one that, unlike the old mechanism, leaves room for the satisfaction of the idealistic exigencies of philosophy. A chapter on "Darwinism and its Critics" emphasizes the strength within scientific circles of what may conveniently be called the Lamarckian reaction against the Darwinian account of the method of organic evolution, and argues that this reaction, by insisting on creative spontaneity, alone makes the genetic method established by Darwin truly genetic, for only through creative spontaneity can there be any genesis at all. The book closes with a withering indictment of Freudianism.

A collection of articles cannot be required to cover the whole of its field of interest, but I miss a chapter on the "logistic" programme of the Viennese Circle (Carnap, Reichenbach, etc.), represented distinctively in this country by Wittgenstein. Fuller bibliographical references would, I am sure, be acceptable to many readers. There is an ample index.

T. E. JESSOP.

Books received also:—

- B. BRANFORD. *Eros and Psyche. An Essay on the Constitution and Destiny of Man*. London: University of London Press. 1934. Pp. ix + 379. 12s. 6d.
- J. F. HECKER, Ph.D. (Foreword by S. Webb, P.C., LL.B.). *Russian Sociology*. London: Chapman & Hall Ltd. 1934. Pp. xvi + 313. 8s. 6d.
- W. SACHS, M.D. *Psychoanalysis. Its Meaning and Practical Applications*. London: Cassell & Co. 1934. Pp. x + 246. 6s.
- J. BAILLIE, D.Litt., D.D. *And the Life Everlasting*. London: Oxford University Press; Humphrey Milford. 1934. Pp. xii + 294. 10s. 6d.
- HU SHIH. *The Chinese Renaissance*. (Haskell Lectures, 1933.) Chicago: University of Chicago Press. London: Cambridge University Press. 1934. Pp. viii + 110. 7s.
- A. E. TAYLOR. *Philosophical Studies*. London: Macmillan & Co. 1934. Pp. vii + 422. 15s.
- C. FARMER. *The Root of All Evil. A Paper on Currency Reform*. Nottingham: J. & H. Bell Ltd. 1934. Pp. 22s. 6d.
- C. W. HENDEL. *Jean-Jacques Rousseau, Moralists*. London and New York: Oxford University Press; Humphrey Milford. Vol. I. Pp. ix + 316. Vol. II. Pp. 348. 25s. the two volumes.
- D. B. MCLACHLAN. *Monadic Astronomy*. Pp. 32. Privately printed at Cambridge by W. Lewis, M.A., at the University Press.
- J. W. BUCKHAM and G. M. STRATTON. *Howison, Philosopher and Teacher. A Selection from His Writings with a Biographical Sketch*. Berkeley: University of California Press. London: Cambridge University Press. 1934. Pp. xiii + 418. 11s. 6d.

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- VARIOUS. (Ed. by L. Jung.) *The Jewish Woman*. (The Jewish Library, 3rd Series.) New York: The Jewish Library Publishing Co. 1934. Pp. xiii + 510. \$2.50.
- C. HARTSHORNE. *The Philosophy and Psychology of Sensation*. Chicago: University of Chicago Press; London: Cambridge University Press. 1934. Pp. xiv + 288. 13s. 6d.
- Collected Papers of Charles Sanders Pierce*. Vol. V. *Pragmatism and Pragmatism*. (Ed. by C. Hartshorne and P. Weiss.) Cambridge, U.S.A.: Harvard University Press. London: Oxford University Press, Humphrey Milford. 1934. Pp. xii + 455. \$5. 21s.
- N. KEMP SMITH (Translator). *Immanuel Kant's "Critique of Pure Reason"* Abridged edition. London: Macmillan & Co. 1934. Pp. xii + 339. 10s. 6d.
- S. F. BACON, M.A. *An Evaluation of the Philosophy and Pedagogy of Ethical Culture*. Washington, D.C.: The Catholic University of America. 1933. Pp. viii + 182.
- VARIOUS. *Modern Tendencies in Philosophy*. (Symposia read at the Joint Session of the Aristotelian Society and Mind Association, 1934.) London: Harrison & Sons Ltd. 1934. Pp. 236. 15s.
- J. R. WATMOUGH. *Orphism*. London: Cambridge University Press. 1934. Pp. vii + 80. 3s. 6d.
- W. A. MERRYLEES, B.Litt. *Descartes: An Examination of Some Features of His Metaphysics and Method*. Melbourne University Press. London: Oxford University Press, Humphrey Milford. 1934. Pp. xxviii + 330. 12s. 6d.
- A. E. TAYLOR. *The Parmenides of Plato*. (Tr. with Introduction and Notes.) London: Oxford Clarendon Press, Humphrey Milford. 1934. Pp. 161. 7s. 6d.
- VARIOUS. *Inquiry into the Unknown*. A B.B.C. Symposium. (Ed. T. Besterman.) London: Methuen & Co. 1934. Pp. 142. 3s. 6d.
- W. T. FELDMAN, Ph.D. *The Philosophy of John Dewey. A Critical Analysis*. Baltimore, U.S.A.: The Johns Hopkins Press. London: Oxford University Press, Humphrey Milford. 1934. Pp. vii + 127. \$1.75. 8s.
- II. S. BOX, B.D., Ph.D. *The World and God. The Scholastic Approach to Theism*. (Preface by Rev. M. C. D'Arcy, S.J.) London: Soc. for Promoting Christian Knowledge. New York: The Macmillan Co. 1934. Pp. xii + 208. 7s. 6d.
- C. P. GROVES, B.A., B.D. *Jesus Christ and Primitive Need. A Missionary Study in the Christian Message*. London: The Epworth Press. 1934. Pp. 260. 6s.
- K. SAUNDERS, Litt.D. *The Ideals of East and West*. London: Cambridge University Press. 1934. Pp. xxiii + 248. 10s. 6d.
- K. MOTWANI, A.M., Ph.D. *Manu. A Study in Hindu Social Theory*. Madras: Ganesh & Co. 1934. Pp. xxvii + 261. Rs. 3.
- G. N. BELKNAP. *A Guide to Reading in Aesthetics and Theory of Poetry*. University of Oregon, U.S.A. 1934. Pp. 91.
- W. B. PILLSBURY. *The Fundamentals of Psychology*. (Third Edition.) New York and London: The Macmillan Co. 1934. Pp. 663. 12s.
- Best Books of the Year 1932*. (Ed. A. J. Philip.) London: Simpkin Marshall Ltd. 1934. Pp. 131.
- B. KUMARAPPA, M.A., Ph.D. *The Hindu Conception of the Deity*. (Foreword by Dr. L. D. Barnett.) London: Luzac & Co. 1934. Pp. xv + 356. 12s. 6d.
- M. SHERMAN, M.D., Ph.D. *Mental Hygiene and Education*. London: Longmans, Green & Co. 1934. Pp. xi + 295. 12s. 6d.

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- A. G. BILLS. *General Experimental Psychology*. London: Longmans, Green & Co. 1934. Pp. viii + 620. 16s.
- M. R. COHEN and E. NAGEL. *An Introduction to Logic and Scientific Method*. London: G. Routledge & Sons Ltd. 1934. Pp. xii + 467. 15s.
- S. H. THOMSON. *The "Notule" of Grosseteste on the "Nichomachean Ethics."* (From the Proceedings of the British Academy. Vol. XIX.) London: Humphrey Milford. 1934. Pp. 26. 2s. 6d.
- J. W. COX, D.Sc. *Manual Skill. Its Organization and Development*. London: Cambridge University Press. 1934. Pp. xx + 247. 16s.
- T. WHITTAKER. *Reason. A Philosophical Essay with Historical Illustrations (Comte and Mill, Schopenhauer, Vico, and Spinoza.)* London: Cambridge University Press. 1934. Pp. 217. 10s. 6d.
- W. R. INGE, K.C.V.O., D.D. *Vale*. London: Longmans, Green & Co. 1934. Pp. 127. 3s. 6d.
- A. A. LUCE, D.D. *Berkeley and Malebranche. A Study in the Origins of Berkeley's Thought*. Oxford University Press. London: Humphrey Milford. 1934. Pp. xi + 214. 10s.
- H. BERGSON. *La Pensée et le Mouvant. Essais et Conférences*. (3e édition.) Paris: Librairie Félix Alcan. 1934. Pp. 322. Frs. 25.
- P. MOUY. *Le Développement de la Physique Cartésienne, 1646-1712*. Paris: J. Vrin. 1934. Pp. 342. Frs. 40.
- MM. ABELÉ, BURDO, DESCOQS, JARLOT, JOLIVET, MONNOT, ROMEYER, DE SAINT-SEINE, SOUILHÉ. *Archives de Philosophie*. Vol. X, cahier iv. Etudes critiques. Paris: Beauchesne. 1934. Pp. 271. Frs. 50.
- H. LEENHARDT, D. ès L., D. ès S. *La Nature de La Connaissance et l'erreur initiale des Théories*. Paris: Librairie Félix Alcan. 1934. Pp. 351. Frs. 35.
- P-M. SCHUHL, D. ès L. *Essai sur la Formation de la Pensée Grecque*. Paris: Librairie Félix Alcan. 1934. Pp. viii + 466. Frs. 50.
- P-M. SCHUHL, D. ès L. *Platon et l'Art de son Temps. ("Arts Plastiques.")* Paris: Librairie Félix Alcan. 1933. Pp. 123. Frs. 20.
- H. DELACROIX. *Les Grandes Formes de la Vie Mentale*. Paris: Librairie Félix Alcan. 1934. Pp. 187. Frs. 10.
- J. MARITAIN. *Sept Leçons sur l'Être et les Premiers Principes de la Raison Speculative*. Paris: Pierre Téqui. 1934. Pp. 163.
- M. LENGART. *Essai sur les Conditions du Progrès Moral*. Paris: Librairie Félix Alcan. 1934. Pp. 167. Frs. 15.
- Dictionnaire de Spiritualité: Ascétique et Mystique: Doctrine et Histoire*. Fascicule III. Anglaise (Spiritualité-Ascèse, Ascétisme). Publié sous la direction de M. Viller, S.J. Paris: Beauchesne et Fils. 1934. Pp. 642-959.
- P. GUÉRIN, D. ès L. *L'Idée de Justice dans la Conception de l'Univers chez les Premiers Philosophes Grecs. De Thalès à Héraclite*. Paris: Librairie Félix Alcan. 1934. Pp. 115. Frs. 10.
- P. GUÉRIN, D. ès L. *Pensée Constructive et Réalités Spirituelles. Essai de Psychologie Formelle a propos de l'Ascétisme Religieux*. Paris: Librairie Félix Alcan. 1934. Pp. 451. Frs. 40.
- V. BIAL. *L'Idée de Dieu Seule mène l'Homme Éternel. Esquisse d'une Synthèse psychanalytique intuitive*. Paris: J. Vrin. 1934. Pp. 30. Frs. 3.50.
- A. COHN. *Hauptprobleme der Wertphilosophie*. Wien: Jahoda & Siegel. 1934. Pp. 66.
- VARIOUS. (Ed. E. Harms.) *Idealismus. Jahrbuch für die Idealistische Philosophie*. (Band I.) Zürich: Rascher & Cie. 1934. Pp. 280.
- Platone: Fedro*. Translated by C. Guzzo, with Introduction and Notes by A. Guzzo. Naples: L. Loffredo. 1934. Pp. 205. Lire 10.50.

THE BRITISH INSTITUTE OF PHILOSOPHY

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INSTITUTE NOTES

ANNUAL MEETING

The Ninth Ordinary General Meeting of the Institute was held at University Hall, 14, Gordon Square, London, W.C. 1, on Wednesday, July 4th, at 5.30 p.m. After the unanimous adoption of the Annual Report and Statement of Accounts, short addresses were given by the President, Sir Herbert Samuel, and Professor John Macmurray.

ADDRESS BY SIR HERBERT SAMUEL

Members of the Institute will see from the Annual Report that its finances are in a somewhat more satisfactory condition than was the case a year or two ago; yet the situation still gives rise to some concern, and the financial position will not be firmly established until we are assured of a considerably larger income through a substantial increase in our membership. If all our members would be good enough to consider whether among their acquaintances there are not some persons who, by their interest in philosophy, would be suited for admission to this Institute, and would suggest their names to the Director of Studies, they would be rendering a useful service.

The Editor of our JOURNAL invited me some months ago to open a discussion on the present position of British Philosophy, and I accepted that invitation with some trepidation. I felt, however, that if I wrote anything at all, it should be of a somewhat provocative character, calculated to arouse controversy. I spend my life in an atmosphere of controversy, and, after all, controversy is not a bad thing. A nation which is without it is a dead nation, and an Institute which is without it may soon become somnolent. Yet I confess that I opened the subsequent number of the JOURNAL with some

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anxiety, for I thought it very possible that those who replied to my letter might fall upon me with indignant ferocity and rend me in pieces. On the contrary, I found myself very kindly treated. Dr. Collingwood, speaking with his great authority, expressed a general agreement; and if Mr. Aldrich and Lord Listowel were more critical, they were at the same time very tolerant. I think, indeed, that there is a growing agreement with the point of view which I expressed, that philosophy must keep itself in close relation with life, with the world of common-sense. It may be that we are at a turning-point in British philosophy, going back to earlier tendencies and away from Kantian methods. We may indeed be returning, so far as the subject-matter allows, to the Baconian methods, which have proved so brilliantly successful in the sphere of science. As Dr. Collingwood says, these tendencies are clearly manifest in the work of the two greatest of our living philosophers, Professor Whitehead and Professor Alexander, as well as in the work of General Smuts.

I would give an example to which I have briefly referred on a previous occasion. Philosophy has always concerned itself with the problems of Space and of Time. Each has received prolonged and separate examination, and it has been sought to relate each to the other. Now intervenes a new fact. Rutherford and other physicists have discovered by laboratory methods that the atom, which, as its name implies, was thought to be an entity that was indivisible, consists, in fact, of infinitesimal units of electricity in violent motion. Although it is, of course, true that we do not know what electricity is, and although it is also true that later researches may possibly find some flaw in the electron theory of matter, still the proofs that are offered are so convincing, the experiments have been so repeatedly confirmed, that thinkers are bound to accept the theory as a working basis. Now this discovery was unknown to the Greek philosophers, though apparently dimly foreseen by some of them; it was, of course, unknown to Descartes; it was unknown to Kant. It creates for philosophy a new position. It appears that in the physical world a thing not merely *is* but *happens*. Whitehead expresses this in a simple sentence: "The event is the unit of things real."

The result to philosophy must be that any attempt to treat Time and Space as separate entities is futile. The one cannot, by any possibility, be separate from the other. At the heart of the physical universe there is motion, electric units of various kinds in rapid movement. Motion means that *this* is *here* at one time and *there* at another time. You cannot have motion from here to there without this time and that time.

When matter was regarded as inert, it was possible to conceive Extension apart from Time. A piece of rock, for example, was the same ten million years ago and might be the same ten million years hence; for it "Time stands still." But when we accept the kinetic nature of matter, we realize that the rock essentially is not the same from one ten-millionth of a second to the next.

Space without Time is impossible in the real universe; just as length and breadth is impossible without thickness. We can draw geometrical diagrams on a sheet of paper and say that they are contained in length and breadth without thickness, but we know very well that if, in fact, we remove the thickness of the lines of ink and the thickness of the paper they would disappear. The conception is, in fact, what Vaihinger calls "a fictional abstraction."

There can be no Extension without Time; and similarly, there can be no Time without Extension; for if there were no extension, and therefore no motion, nothing would happen, nothing would exist, and consequently there could be no duration. If, therefore, you were to eliminate either Time or Space and thereby make movement impossible, the universe would disappear.

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and with it physics and metaphysics, philosophy and the philosopher. This has been clearly shown by Alexander in his great work, *Space, Time and Deity*. The conclusion is that Space-Time is the only subject-matter for philosophers, and that discussions which are pursued and books that are written on other lines must necessarily be both a waste of space and a waste of time!

This Institute must of course be eclectic; it contains men and women belonging to all schools. I should be sorry indeed to suggest that we should pass a resolution at this Annual Meeting to some such effect as "It is desirable that philosophy should base itself on actuality rather than on pure ratiocination," yet I do entertain a personal hope that it is rather in that direction that its activities will tend.

ADDRESS BY PROFESSOR JOHN MACMURRAY

I am glad that this opportunity to express my own sense of the function of this Institute finds me able and anxious to support the plea of our president for a philosophy that is practical and concerned with concrete problems. The existence of the Institute is itself a sign of an awakening consciousness of a need for philosophy in the general public, and in philosophers of a need for the public. Its function is to bring the philosopher and the ordinary citizen into co-operative alliance. This is an extremely difficult task, even when it is undertaken with the greatest good will on both sides; and we shall need courage and patience if it is to be carried through.

Philosophy itself is inherent in the human situation. It is not an invention; nor is it the expression of a limited need which arises in certain people in face of certain special problems. It is always and everywhere fundamental to human life. Every man, every society of men, has its philosophy, though for the most part it is implicit rather than systematically reasoned. It is created by being lived. It is worked out in action through the pressure of the continuous necessity for social adjustment. When the tempo of social change is slow enough for these adjustments to be made gradually and instinctively, the mass of mankind will remain unconscious of any pressing need for a conscious formulation of the philosophical structure of their social life. But there come times, like our own, when the rate of change makes social adjustment difficult and harassing to everyone concerned, so that we are all forced into consciousness of the philosophical structure which determines the shape and the direction of our life in society. At such times the demand for philosophical understanding becomes widespread, and the concrete and practical issues which are the core of philosophy emerge clearly and force themselves upon our attention. In this we find both the origin of the British Institute of Philosophy and the key to its natural function.

Philosophers, whatever else they may be in virtue of their common humanity, are technicians. The special genius of the philosopher consists in an unusual capacity to devise means of intellectual expression through which the fundamental structure of human experience can be formally and adequately thought out into common language and so made communicable. All techniques are, of course, means to an end, and the technique of philosophy is no exception. It is the indispensable technique for large-scale social adjustment whenever this has to be consciously and deliberately undertaken. But all technicians are liable to become so absorbed in the development of their technique that it becomes an end in itself. They are apt to forget what the technique is for, and what are the concrete and practical problems which it is devised to solve. Like the pure mathematician, who is also creating a technique,

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the philosopher is apt to become absorbed in the elaboration of abstract devices for the analysis and statement of all problems to which his technique can apply, until he becomes unwilling and even unable to apply it to the contemporary philosophical problem. For there always is a contemporary philosophical problem which is *the* problem to which the technique should be applied. Or like the poet, who is the master of another technique of expression, he is apt to find himself with a tremendous capacity for expression, but with nothing particularly important to express by means of it. Tennyson is reported to have remarked at a dinner-party on one occasion, "I am undoubtedly the greatest master of the English language since Shakespeare. Unfortunately I have nothing to say." In this lies the difficulty which faces the Institute of Philosophy. The public that looks to the Institute knows in a vague and rather dumb fashion what it needs expressed, without possessing the technique for its expression. The trained philosopher has the technique, but is apt to be unconscious of what it is urgently necessary to express and to be understood by means of it. How are these two sides of the philosophical situation to be united in harmonious co-operation?

Here is our problem as members of this Institute. I know that it is not easily to be solved. But there is one thing that often inspires me with hope. This country has not yet made its positive contribution to the history of European philosophy. It has revealed its philosophical tendency in a series of notable philosophers. But their work has always been, in its large effect, critical and destructive. There have been two major periods of European philosophy in modern times. The first, originating with Descartes, was created and dominated by the clear mathematical analysis of the French intellect. The second we owe to the romantic genius of the great German thinkers of whom Hegel was the culmination. Between the two periods, as the transitional figure, stands Immanuel Kant. That second period is rapidly drawing to a close, if it is not already over. The third period, which is beginning, will be dominated by a set of problems which have a peculiar affinity with the temperament and philosophical tendency of the British people, and they will only be solved by philosophers who are surrounded and supported by a social consciousness which demands their solution and which provides the public co-operation which this Institute exists to foster. Of these things I feel reasonably certain. And that feeling provides me with a reasonable hope that the British Institute of Philosophy may yet play an honourable and not unimportant part in bringing the unconscious philosophy of this country to that consciousness of itself and that self-expression which will usher in a new era of European philosophy.

LECTURE COURSES for the Michaelmas Term: Session 1934-35:—

"THE STATUS OF THE SELF IN REALITY," a course of six weekly lectures by W. G. Maclagan, M.A., Ph.D. (of Oriel College, Oxford), on Fridays at 5.45 p.m., at University Hall, 14 Gordon Square, W.C.1, beginning October 19th. Fee for the course, 12s. 6d. Members free.

"PSYCHOLOGY OF SENSE-PERCEPTION AND MEMORY," a course of six weekly lectures by Professor Beatrice Edgell, on Mondays, at 5.45 p.m., at University Hall, 14 Gordon Square, W.C.1, beginning October 15th. Fee for the course, 12s. 6d. Members free.

"INTRODUCTION TO SPECULATIVE PHILOSOPHY," a class by the Director of Studies, on Wednesdays, at 5.45 p.m., at University Hall, 14 Gordon

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Square, W.C.1, in the Michaelmas and Lent Terms, beginning Michaelmas Term, October 17th; Lent Term, January 16th. Fee for the Session, £1 1s. Terminal, 12s. 6d. Members free.

The Evening Meetings for the Michaelmas Term of the Session will be held at University College, Gower Street, W.C.1, at 8.15 p.m., on the following dates:—

Tuesday, October 16th: Presidential Address. The Rt. Hon.* Sir Herbert Samuel, G.C.B., G.B.E., M.A., M.P.

November 13th: "The Biological Status of Pleasure." H. W. B. Joseph, M.A., F.B.A.

December 11th: "The Intellectual Element in Aesthetic Appreciation." Mr. Roger Fry.

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[Suggested]

FORM OF BEQUEST

I bequeath to THE BRITISH INSTITUTE OF PHILOSOPHY the sum of free of duty, to be applied to the purpose of that Institute, and I declare that the receipt of the Honorary Secretary or other proper officer for the time being of that Institute, shall be a sufficient discharge for the same.





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